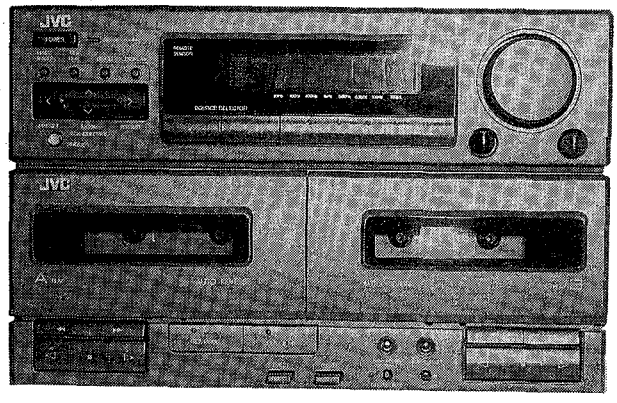
JVC

SERVICE MANUAL

STEREO RECEIVER

CA-MXC5BK

UNIT No. DX-MXC5BK



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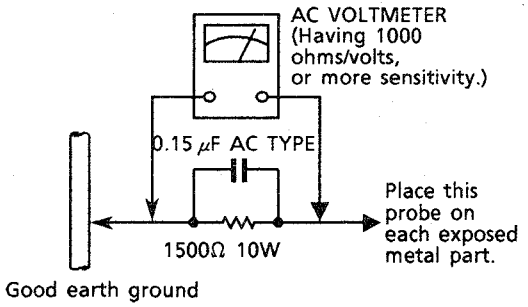
No. 20389
Jan. 1993

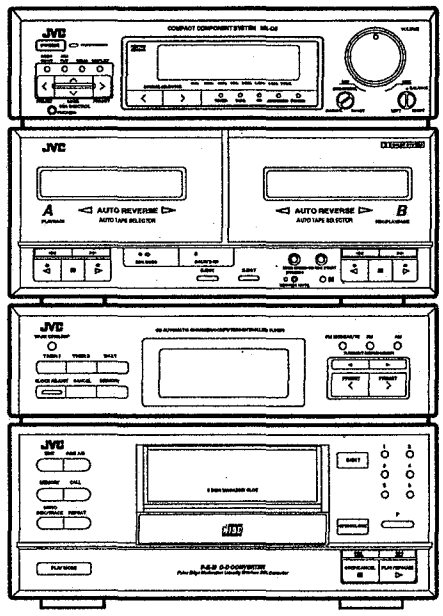
Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute repalcement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, contorl shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor.
     Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.



Thank you for purchasing thus JVC Compact Component Stereo System. We hope it will be valued addition to your home, giving you years of enjoyment.

Be sure to read this instruction manual carefully before operating your new stereo system. Here you will find all the information you need to set up and use the system.

For questions that cannot be answered in the manual, please contact your dealer.

IMPORTANT CAUTIONS

1. **Installation of the unit**
- Select a place which is level, dry and neither too hot nor too cold (between 5°C and 35°C).
- Leave sufficient distance between it and your TV.
- Do not use it in a place subject to vibrations.

2. **Power cord**
- Do not handle the power cord with wet hands!
- When unplugging from the wall outlet, always pull the plug, not the power cord.

3. **Malfunctions, etc.**
- There are no user serviceable parts inside. If anything goes wrong, unplug the power cord and consult your dealer.
- Do not insert any metallic object into the receiver.

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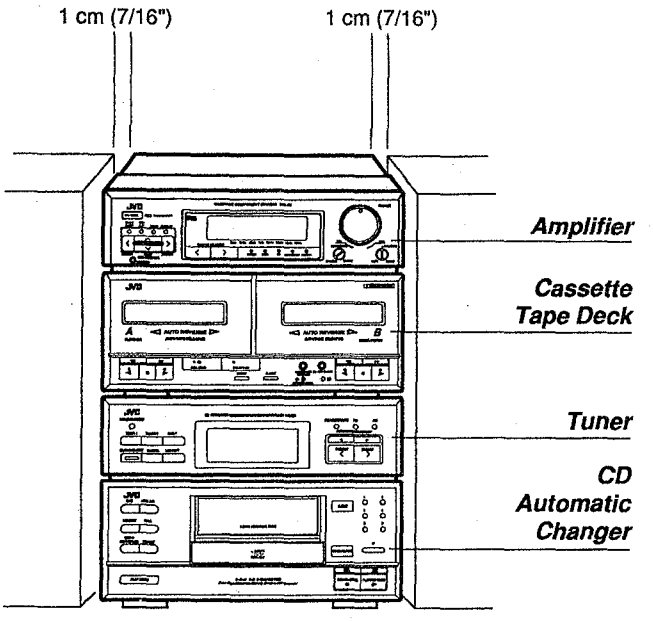
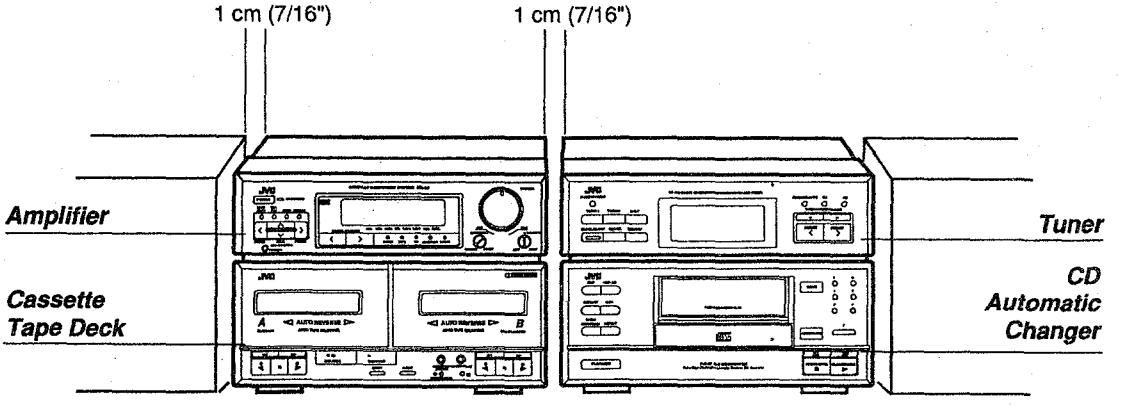
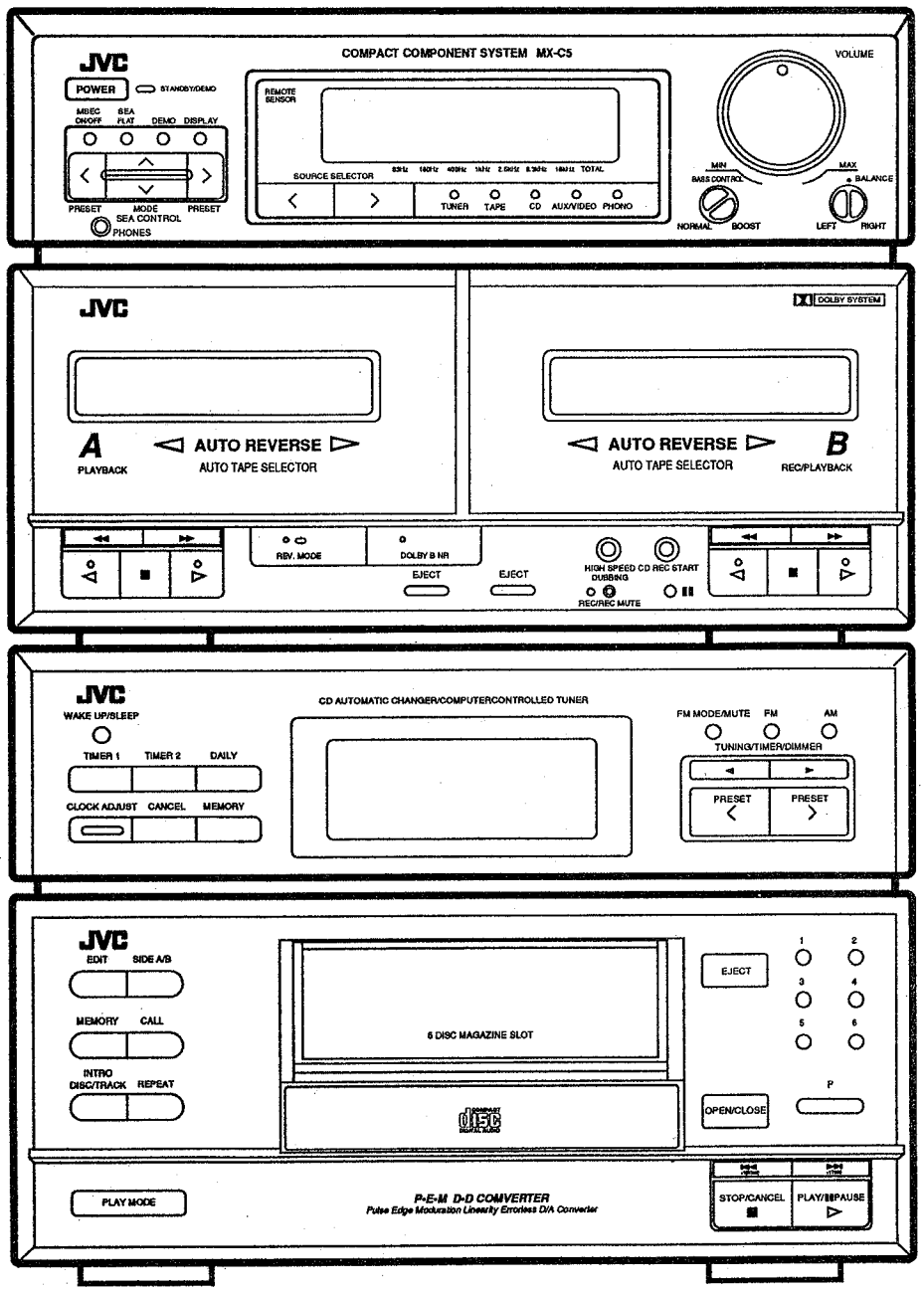
Laying Out the System

There are two ways to lay out the system as shown below:

- Leave a space of at least one cm on both sides of the amplifier and keep the back at least 10 cm from the wall for ventilation.
- If the system does not work well or needs repairing, please take all the components with you to the nearest agent.

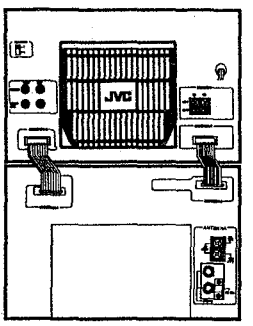





JVC
COMPACT COMPONENT SYSTEM MX-C5
POWER
STANDBY/DEMO
MIC/EC ON/OFF
SEA FLAT
DEMO
DISPLAY
PRESET
MODE
PRESET
SEA CONTROL
PHONES
REMOTE SENSOR
SOURCE SELECTOR
TUNER
TAPE
CD
AUX/VIDEO
PHONO
VOLUME
MIN
MAX
BASS CONTROL
BALANCE
NORMAL
BOOST
LEFT
RIGHT
JVC
DOLBY SYSTEM
A
PLAYBACK
AUTO REVERSE
AUTO TAPE SELECTOR
AUTO REVERSE
AUTO TAPE SELECTOR
B
REC/PLAYBACK
REV. MODE
DOLBY B NR
EJECT
EJECT
HIGH SPEED DUBBING
CD REC START
REC/REC MUTE
JVC
WAKE UP/SLEEP
TIMER 1
TIMER 2
DAILY
CLOCK ADJUST
CANCEL
MEMORY
CD AUTOMATIC CHANGER/COMPUTERCONTROLLED TUNER
FM MODE/MUTE
FM
AM
TUNING/TIMER/DIMMER
PRESET
PRESET
JVC
EDIT
SIDE A/B
MEMORY
CALL
INTRO
DISC/TRACK
REPEAT
6 DISC MAGAZINE SLOT
EJECT
1
2
3
4
5
6
OPEN/CLOSE
P
PLAY MODE
P-E-M D-D COMVERTER
Pulse Edge Modulation Linearity Errorless D/A Converter
STOP/CANCEL
PLAY/PAUSE

Getting Started

Connecting the System Components



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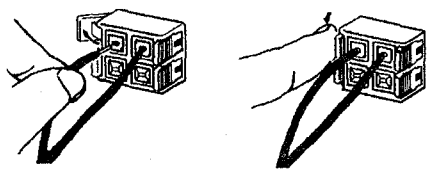

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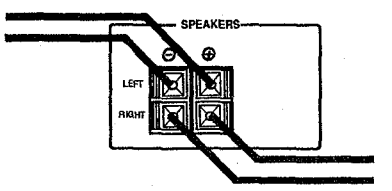


4

Connection Notes

- Before you plug in the system, you must make all the necessary connections.

Connecting the Two stereo Components

- Connect the Amplifier/Tape Deck component and the Tuner/CD Automatic Changer component.

Connect the two ribbon cables (CONNECTOR A and B) from Tuner/CD Automatic Changer component to the Amplifier/Tape Deck component.

Connecting The Speakers

Speaker Terminals

Connect the speakers to the Amplifier/Tape Deck components as follows:

1. **When connecting speakers, open each terminal and insert the end of the speaker wire as shown.**
2. **Close the terminals as shown to clamp the speaker wires in place.**

SPEAKERS

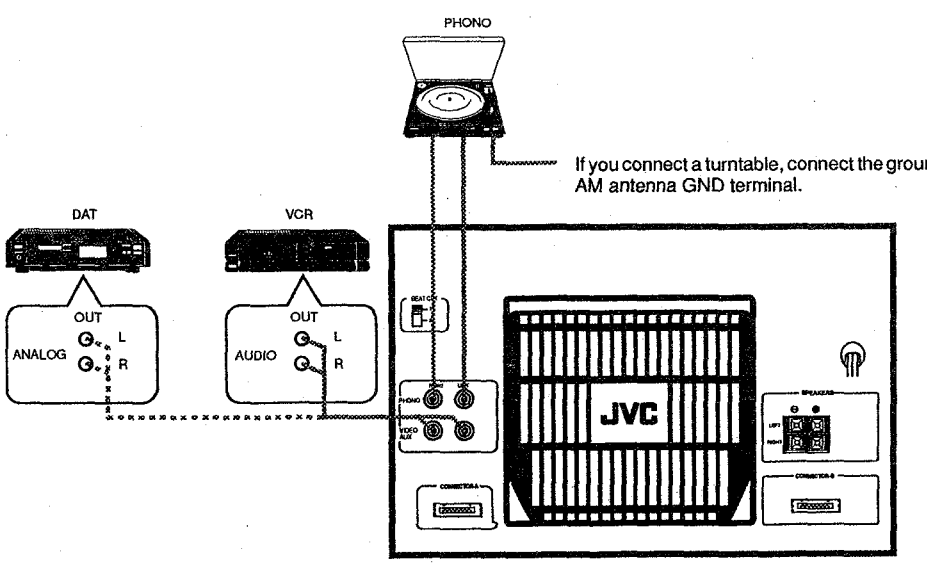
Connect the Speakers to the SPEAKERS terminal on the Amplifier/Tape Deck as follows.

3. **Connect the (+) and (–) terminals of the right-side Speaker to the (+) and (–) terminals marked RIGHT on the Amplifier/Tape Deck.**
4. **Connect the (+) and (–) terminals of the left-side Speaker to the (+) and (–) terminals marked LEFT on the Amplifier/Tape Deck.**

- Using speakers with the correct impedance. The correct impedance is indicated on the rear panel.

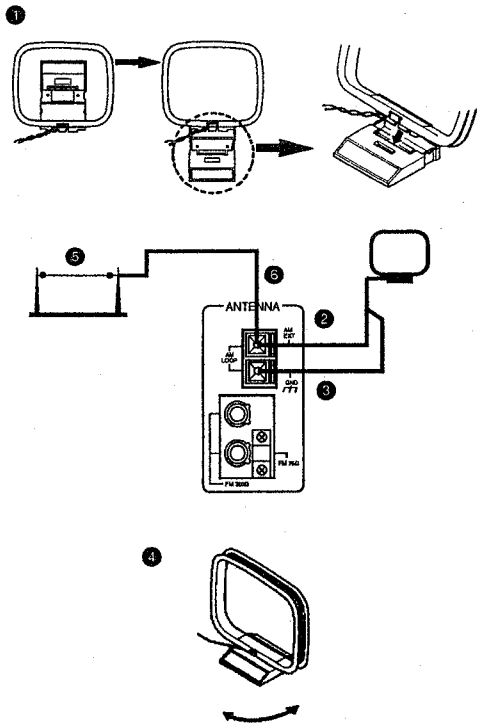
Connecting Other Components

The amplifier can also be connected to a Turntable (PHONO), a Video Cassette Recorder (VCR) and a Digital Audio Tape (DAT) Deck.



1-6 (No. 20389)

AM Antenna Connections



AM Loop Antenna

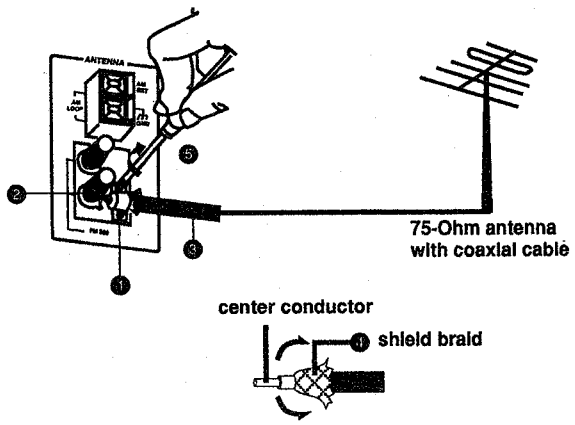
1. **Fold out the loop from the antenna base.**
2. **Connect one antenna wire to one of the AM LOOP terminals.**
3. **Connect the remaining antenna wire to the other AM LOOP terminal.**
   Note: These two terminals open and close the same way as the speaker terminals.
4. **Adjust the loop antenna as needed to get the best reception.**

AM Outdoor Antenna

If your AM broadcast reception is unsatisfactory, you should connect an AM outdoor antenna in addition to the loop antenna.
Important! The AM loop antenna must be installed to receive AM broadcasts. Do not disconnect the loop antenna when installing an outdoor antenna.

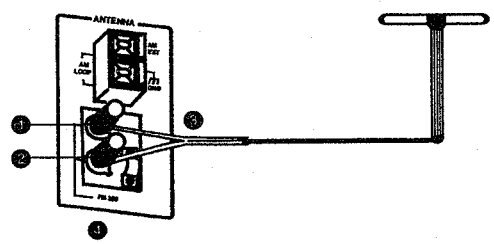
5. **Install a single vinyl-covered antenna wire outdoors. The antenna wire should be about 16 to 40 feet (5 to 12 meters) long.**
6. **Connect one end of the antenna to the AM loop terminal marked AM EXT.**
   Note: Except for the connection, make sure that no uninsulated antenna wire touches the rear panel. Otherwise, you might not receive AM broadcasts.

FM Antenna Connections



FM 75-Ohm Antenna Cable

1. **Loosen the screws holding the bracket.**
2. **Loosen the cap of the 300/75-ohm terminal.**
3. **Insert the round antenna cable through the bracket from below.**
4. **Make sure that the shield braid on the cable contacts the 300/75-ohm terminal.**
5. **Tighten the bracket screws and the cap on the 300/75-ohm terminal.**



FM 300-Ohm Antenna Cable

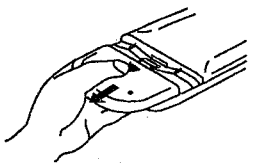
1. **Loosen the cap on the 300/75-ohm terminal.**
2. **Loosen the cap on the 300-ohm terminal.**
3. **Connect the two conductors of the antenna cable to the 300/75-ohm terminal and the 300-ohm terminal.**
4. **Tighten the caps on both terminals.**
   Note: Whether you use the 75-ohm or 300-ohm cable, make sure the antenna conductors do not touch any other terminals on the rear panel. This could cause poor reception.

Note:

- Make sure the antenna conductors do not touch any other terminals, connecting cords and power cord on the system.
  This could cause poor reception.

Installing Batteries in the Remote Controller

1



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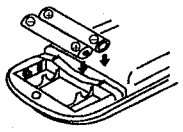

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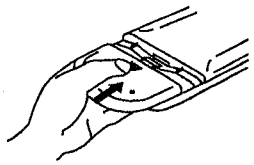


1. **Remove the battery compartment lid.**
   Press the lid and slide it in the direction of the arrow.

2. **Insert the batteries.**
   Use two UM-4/AAA (24F)/R03 size batteries.
   Make sure the + and – polarities on the batteries and compartment are the same.

3. **Attach the lid.**
   Press the lid and slide it in the direction of the arrow.

Note:

- Batteries installed incorrectly may burst of leak. Pay attention to the following:
  - When the Remote Controller is not in use for a long period of time, remove the batteries.
  - Do not mix old and new batteries.
  - Do not mix batteries of different types, even if their shapes are the same.
  - When batteries become weak, the operating distance of the Remote Controller is greatly reduced and you will need to replace the batteries.

AC power connection

Caution: To prevent electric shock, turn all stereo components off before you install or remove power cords.

Important! Before you plug the power cord into an outlet, make sure that all stereo components are connected correctly.

Using the Amplifier

Using the Power Switch

1. **Press the POWER switch to turn on the stereo system.**
   When the POWER switch is not pressed and the power cord is plugged in, the stereo is in STANDBY mode and STANDBY/DEMO indicator lights. In STANDBY mode, the stereo uses a small amount of power (12 watts) for the clock, memory contents, and any timers which are set.

2. **To disconnect power completely, unplug the power cord.**

Adjusting the Volume controls

Volume
Turn the VOLUME knob to adjust the volume level of the speakers or headphones.

- Connect headphones to the PHONES jack on the amplifier for listening through headphones. No sound will be produced from the speakers.

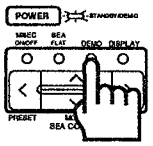
Important! There is danger of your hearing being affected if you listen to your sound system at an excessively high volume level. You must be especially aware of this danger when using headphones.

Balance
Turn the BALANCE knob to adjust the left-and-right sound balance in the speakers or headphones.

Bass Control
Turn the BASS CONTROL knob to adjust the output level of the low frequencies.
Turning this control toward BOOST will boost the low frequencies.

DEMO
The 51 SEA patterns which are inbuilt in the system will be played to you one by one. Please use this function while music is being played back.

1. **Press the DEMO button.**
   The STANDBY/DEMO indicator starts flashing.

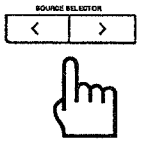


2. **Demonstration playback will start from POPS MODE 1.**
   Frequency wave patterns change in accordance with the pattern of each demo mode.

- To cancel the demonstration playback, press the DEMO button again. It can also be cancelled by pressing any one of the other buttons on the amplifier.

Selecting the Source

Select the SOURCE you want to listen to with SOURCE SELECTOR button.



- Each time you press the SOURCE SELECTOR button, the source changes to the next one in the sequence, and the corresponding SOURCE indicator lights.

↔ TUNER ↔ TAPE ↔ CD ↔ AUX/VIDEO ↔ PHONO ↔

Using Turntable, VCR and DAT

In addition to the CD Automatic Changer, Tuner, and Cassette Tape Deck, the amplifier can also play a turntable, a VCR and a DAT.

1. **Turn the power for each piece of component ON.**

2. **To play a record, press the SOURCE SELECTOR button on the amplifier so that PHONO lights on the SOURCE indicator.**
   To use VCR or DAT, press the SOURCE SELECTOR button on the amplifier so that AUX/VIDEO lights on the SOURCE indicator.

3. **To operate the each component, refer to its instruction manual.**

- You can operate a JVC VCR using the remote controller.

When VCR is connected, the sound is heard through the speakers.

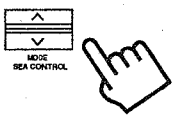
Using the SEA Function

SEA (Sound Effect Amplifier) is a function which divides playback sound into 7 frequency ranges between 63Hz (bass) and 16kHz (treble); it then adjusts the sound quality by increasing and decreasing the level of each frequency range.
The total of 51 pre-programmed SEA settings are available in this system. Sound quality of these settings has been carefully adjusted using the SEA function. You can, therefore, find the sound quality you like by simply selecting the mode and the pattern without having to adjust each of the 7 frequency ranges.
There are 6 modes - POPS, JAZZ, ROCK, MOVIE, CLASSIC and FLAT - in the 51 pre-programmed SEA settings. Each of these modes, except for the FLAT mode, comes with 10 different patterns.

The pre-programmed SEA modes are:

POPS	Good for vocal music.
JAZZ	Gives a feeling of a live atomosphere.
ROCK	Boosted low and high frequencies. Good for acoustic music.
MOVIE	Adds breadth to the sound so you feel like you're in a movie theater.
CLASSIC	Set for wide and dynamic sound stereo systems.
FLAT	Gives a flat sound by tuning all frequencies to 0. Press the SEA FLAT button to obtain this mode.

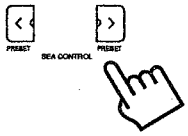
1. **Press the MODE button of the SEA CONTROL.**



Each press of the MODE button changes the mode displayed in the following order:

MODE ∨ button
→
POPS — JAZZ — ROCK — MOVIE — CLASSIC — FLAT
←
MODE ∧ button

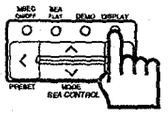
2. **Press the PRESET button of the SEA CONTROL.**
   Each press of the PRESET button changes the pattern in the following order:



PRESET > button
→
1 ~ 10
←
PRESET < button

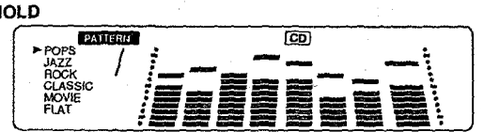
Changing the SEA Display

Four display modes (PEAK HOLD, PEAK LINE, REVERSE, EQUALIZING PATTERN) are available. Each time you press the DISPLAY button, the display mode will change in the following order:

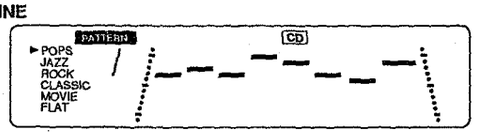


→PEAK HOLD→PEAK LINE→REVERSE→EQALIZING PATTERN →(back to the beginning)

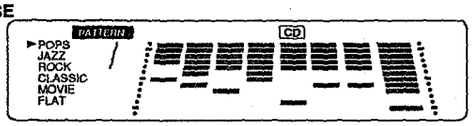
PEAK HOLD



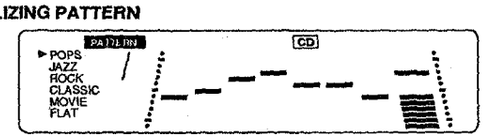
PEAK LINE



REVRESE



EQUALIZING PATTERN

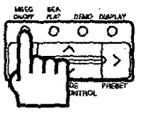


Using the MSEC Feature

MSEC (Multi Source-related Effect Control) is a function which can memorize and then automatically recall the SEA pattern as well as SEA mode for each sound source. If the power is switched off or the sound source is changed, the SEA modes and patterns will be stored in the memory. These memorized modes and patterns can later be automatically recalled as you change the sound source.

Press the MSEC ON/OFF button.

The indicator starts flashing.



Set the SEA mode and pattern of your choice for each source.

The unique combination of SEA mode and pattern you have selected for each source will be automatically recalled when you change the sound source.

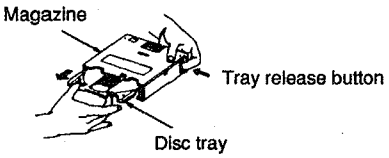
- When MSEC is turned OFF, the SEA mode and pattern will not be memorized.
- If MSEC is initially turned OFF and then turned ON during the playback, the SEA mode and pattern which have been memorized will be automatically recalled.

Using the CD Automatic Changer

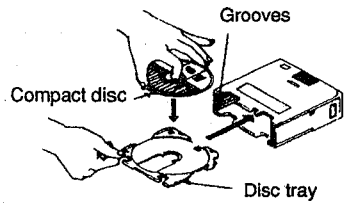
Installing the discs in the magazine

How to install the discs

1. **The discs trays in the magazine are removable.**
   Slide the disc tray out while simultaneously the tray release button.



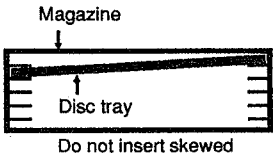
2. **Locate a disc on the disc tray with its label side up.**



3. **Line up the disc tray with the grooves in the magazine and push the disc tray right in.**
   It is unnecessary to press the tray release button when inserting the disc tray.

- If you wish to use 8 cm (3") CDs, please obtain the special magazine (XC-M73), designed for these.

Please note:
- Never bend the disc tray or force it into the magazine.
  A disc tray inserted skewed may cause a malfunction.



- The openings in the disc trays are for the passage of the laser signal. These openings leave a part of the shiny surface of the disc exposed. Please take care not to touch this shiny surface.
- It is not possible to play from the disc if it is located upside-down.
- Never place a disc directly in the magazine without using the disc tray.

Preliminary Operation

Up to seven discs can be played by using both the SINGLE PLAY TRAY and magazine.

Insert the magazine, discs installed in, in the MAGAZINE SLOT.
Push it gently until it clicks in place.

Install a disc on the SINGLE PLAY TRAY.

1. **Press the OPEN/CLOSE button on the CD Automatic Changer.**
   The SINGLE PLAY TRAY slides out.

2. **Place a CD (with a label facing up) in the tray, and press the OPEN/CLOSE button again.**
   The tray slides back in.

3. **Press the CD Automatic Changer PLAY/PAUSE button, or select CD with the amplifier SOURCE SELECTOR.**
   The CD Automatic Changer plays the CD on the single play tray with the first track.

The single play tray is indicated by P on the display. For the order in the magazine, the bottom disc tray is Disc No. 1, the disc tray above it is Disc No. 2, and the top disc tray is Disc No. 6.

To Stop Play

Press the STOP/CANCEL button on the CD Automatic Changer or Stop button on the Remote Controller.

Ejecting the MAGAZINE

Press the EJECT button on the CD Automatic Changer.

Ejecting the CD

1. **Press the OPEN/CLOSE button, and take the CD out of the tray.**

2. **Press the OPEN/CLOSE button again to close the tray.**

Continuous Play

In CONTINUOUS mode, you may play any of the selection of any disc, to the final track on the DISC No. 6, continuously.

Press the PLAY MODE button and select the CONTINUOUS mode.
If you use the Remote controller, press the CD CHANGER button and then press the CONTINUE button.
The CONTINUE indicator lights.

- When the power is switched on, control enters the CONTINUOUS mode.
- When you select CD with amplifier SOURCE SELECTOR, the CD Automatic Changer begins to play.

Note:
- When you press the PLAY MODE button and change the mode, set the CD Automatic Changer to the Stop mode. You cannot change the mode during playing.

To Play from the First Selection

Press the PLAY/PAUSE button on the CD Automatic Changer.

The discs are played in order from the first track on the single play tray to the last track on Disc No. 6.

- If the single play tray is open, it will close automatically and playback will begin.
- If there is no CD on the disc tray or there is no disc tray, the CD on the next disc tray is played.

Stopping and Restarting Playback

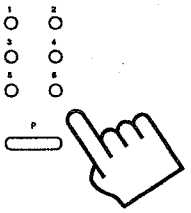
1. **Press the PLAY/PAUSE button on the CD Automatic Changer.**
   Playback stops temporarily.

Note:
- If you press the CD CONTROL ▶ button on the Remote Controller, the playback will not stop temporarily.

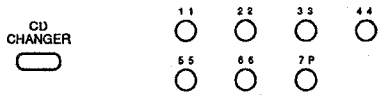
2. **Press the PLAY/PAUSE button again.**
   Playback restarts.

Selecting a Disc to Play

1. **Select the disc desired with the DISC button on the CD Automatic Changer.**



If you use the Remote Controller, press the CD CHANGER button, and specify the Disc No. with numeric keys 1 to 6 and P.



- The discs are played in order from the first track on the CD with the selected disc No. to the last track on Disc No. 6.

Notes:
- If there is no CD on the disc tray or the disc No. with disc tray specified, the CD on the next disc tray will be played.
- The disc No. indicators go off if there is no CD on the disc tray and there is no disc tray. You cannot select any disc No. if the corresponding indicator is off.

Selecting a Track to Play

Use the ⏮ ⏭ button.

Scanning through track numbers (AUTO SEARCH)

Each time the ⏮ button is pressed, the track moves backward by one number.
Each time the ⏭ button is pressed, the track moves forward by one number.

- If you press the ⏮ or ⏭ button continuously while the CD Automatic Changer is in the stop mode, the track number will continue to move in the selected direction.
- If you press the ⏮ or ⏭ buttons while the CD Automatic Changer is in the pause mode, you will find the original track you selected. You can restart playback by pressing the PLAY/PAUSE button.

Searching for a specific part of a track (MANUAL SEARCH)

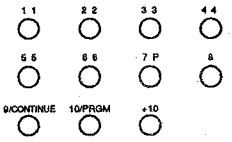
If you hold down the ⏮ button while the CD Automatic Changer is playing or has paused, fast rewinding will occur.
If you hold down the ⏭ button while the CD Automatic Changer is playing or has paused, fast forwarding will occur.

Notes:
- When the track number selected on a certain disc does not exist, play starts from the final selection on that disc.
- If there is no CD on the disc tray or you specify a track with the disc No. without a disc tray, the display Disc No. indicator will go off, and the CD on the next disc tray will be played.

Using the Remote Controller to Select a Track

There are two ways to search for a track with the remote controller:

Numeric keypad



AUTO SEARCH buttons ⏮ or ⏭

Using the Numeric Keypad

1. **Press the CD 10KEY button on the Remote Controller.**

2. **Enter the track's number with the numeric keys.**
- If the track you want to hear is the 8th track. press the 8 key.
- If the track you want to hear is the 15th track, press the +10 key and the 5 key.
- If the track you want to hear is the 20th track, press the +10 key and the 10 key.

Using the Auto Search Buttons

Press the Auto Search ⏮ or ⏭ button on the Remote Controller to scan through the track numbers.

Note:
- You cannot search manualy by holding down the ⏮ or ⏭ button on the Remote Controller.

Listening Repeatedly

Using the REPEAT button.

Each time you press the REPEAT button, the mode will change in the following order:

→ **REPEAT** → **REPEAT 1** → **OFF**→ (back to the beginning)

REPEAT
If all discs in the CD Automatic Changer and the last track are played, playing will be repeated from the first disc.
It will keep repeating until you cancel the repetition.

- If you select the REPEAT mode in the PROGRAM mode, all the programmed tracks will be played, and they will be repeated in the order programmed.

REPEAT 1
The current track will play to the end and then start over again. It will keep repeating until you cancel the repetition.

- If you select the REPEAT 1 mode in the PROGRAM mode, the selected track will be played repeatedly.

Cancelling Repetition
Press the REPEAT button and turn the REPEAT indicator off.
Each track will play till the end without repeating.

INTRO play

This function is useful to search for a disc or track in the CD Automatic Changer.

1. **Press the STOP/CANCEL button on the CD Automatic Changer or Stop button on the Remote controller.**

2. **Press the PLAY MODE button and select the CONTINUOUS mode. If you use the Remote Controller, press the CD CHANGER button and then press CONTINUE button.**
   The CONTINUE indicator lights.

3. **Press the CD Automatic Changer INTRO button and select the desired mode.**
   Each time you press the INTRO button, the mode changes in the following order:

→ **DISC INTRO** → **INTRO** → **OFF**→ (back to the beginning)

DISC INTRO mode
Play the first track of each of the discs in the CD Automatic Changer from the disc on the single play tray to Disc No.6, for 15 seconds.

INTRO mode
Play the beginning of each track of the discs in the CD Automatic Changer from the disc on the single play tray to Disc No.6, for 15 seconds.

4. **Press the PLAY/PAUSE button on the CD Automatic Changer or Play button on the Remote Controller.**

- Each track will be played for 15 seconds in the mode you selected.

Notes:
- When you press the ⏭ or ⏮ button in the INTRO mode, this mode will be canceled, and tracks will be played as follows.
  If you press the ⏭ button, the currently selected track will be played from the beginning in the CONTINUOUS mode.
  If you press the ⏮ button, the track following the currently selected track is played in the CONTINUOUS mode.
  If you hold down the ⏭ or ⏮ button, the manual search function will be available, and you can have fast-rewind or fast-forward.
- If you press the Disc button on the CD Automatic Changer in the INTRO mode, or if you press the CD CHANGER button on the Remote Controller, then select a disc with numeric keys. This will cancel the INTRO mode, and tracks will be played in the CONTINUE mode, starting from the first track of the disc.
- If you press the CD 10KEY button on the Remote Controller, select a disc with numeric keys while playing in the INTRO mode, the INTRO mode will be canceled, and tracks will be played in the CONTINUE mode from that track.

To cancel the INTRO play

1. **Press the STOP/CANCEL button on the CD Automatic Changer or the Stop button on the Remote Controller.**

2. **Press the INTRO button and turn the indicator off.**

Note:
- If you press the STOP/CANCEL button on the CD Automatic Changer or the Stop button on the Remote Controller, and press the PLAY MODE button, the INTRO mode will be canceled, and the CONTINUOUS mode will change to the PROGRAM mode.

Programmed Play

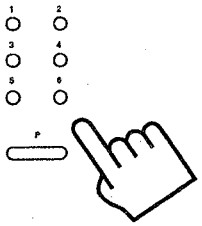
In PROGRAM mode 32 steps can be programmed to play in any desired order from the 7 discs loaded into the magazine and single play tray.

Press the PLAY MODE button and select the PROGRAM mode. If you use the Remote Controller, press the CD CHANGER button and then press the PRGM button.
The PROGRAM indicator lights.

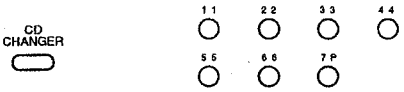
1. **Press the STOP/CANCEL button.**
   This puts the CD Automatic Changer in STOP mode.

2. **Press the PLAY MODE button on the CD Automatic Changer and select the PROGRAM mode.**
   The PROGRAM indicator lights.

3. **Press the DISC button and select a disc.**
   The AL indicator flashes on the display.

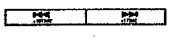


- If you use the Remote Controller, press the CD CHANGER button and then specify the Disc No. with numeric keys 1 to 6 and P.

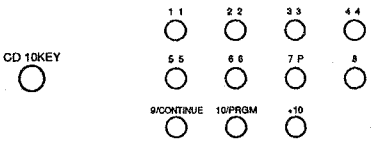


- The AL indicator shows that all the tracks on the selected disc have been selected. If you press the MEMORY button while the AL indicator is flashing, all the tracks on the disc are programmed.

4. **Press the ⏭ or ⏮ button and select a track.**
   The step and the selected track flash on the display.



- If you use the Remote Controller, press the CD 10 KEY button, and then specify a track with numeric keys.

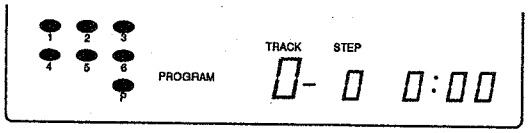


- Select a track while the AL indicator is flashing on the display.

5. **Press the MEMORY button on the CD Automatic Changer. The step and the selected track will light on the display.**
   The CD Automatic Changer will wait for selection of the next track.

6. **Select a track by repeating steps 3 to 5.**

- You can program up to 32 tracks.
- Perform steps 3 to 5 while the display is flashing. If the display stops flashing and lights as follows, perform step 3 and subsequent steps again.



7. **Press the PLAY/PAUSE button on the CD Automatic Changer.**
Playback begins with the first track in the program.

Checking the Program

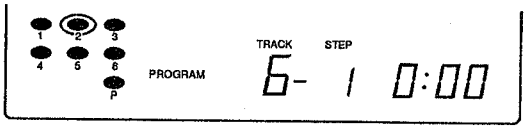
You can check the programmed sequence of playback to determine which tracks will be played in which order.

Note:
- The program contents cannot be displayed during playback. Press the STOP/CANCEL button if the CD Automatic Changer is in play mode.

1. **Press the CALL button once on the CD Automatic Changer.**

The first track in the program are displayed, along with its sequence number.

For example:



This display shows that track 6 on Disc No. 2 is played first.

2. **Press the CALL button repeatedly.**
The rest of the tracks in the program are displayed, along with their sequence numbers.

Listening to Programmed Tracks Repeatedly

1. **Press the REPEAT button to listen to the programmed sequence of playback repeatedly.**

2. **Then press the PLAY/PAUSE button.**

Updating the Program

Adding Tracks to the Program

- You cannot add any track to the program while playing. If the CD Automatic Changer is playing, press the STOP/CANCEL button.

Perform steps 3 to 5 in the section "Programmed Play" on page 13.

Program modification

- You cannot modify the program while playing. If the CD Automatic Changer is playing, press the STOP/CANCEL button.

1. **Hold down the CALL button until the track or step to be modified appears.**
Select them while the step is flashing on the display.
The track and step appear on the display, and the step flashes.

2. **Select the Disc. No. and track.**
The track and step appear on the display, and the step flashes.

- If the display stops flashing and lights, perform step 1 and subsequent steps again.

3. **Press the MEMORY button.**

Deleting Tracks from the Program

- The program contents cannot be deleted during playback. Press the STOP/CANCEL button if the CD Automatic Changer is in play mode.

1. **Press the CALL button.**
Press the CALL button until the track or step to be deleted appears on the display.

2. **Press the STOP/CANCEL button on the CD Automatic Changer.**
The track being displayed will be deleted.

To delete all programmed steps:
- Set the CD Automatic Changer to the Stop mode, press the STOP/CANCEL button and delete all programmed steps.
- Switch the power off.
- The program remains in memory until you switch the power off. To program new tracks, first turn the power off the delete the whole program.

To cancel the PROGRAM mode:
- Set the CD Automatic Changer to the Stop mode, press the PLAY MODE button, and select another mode.

Random Play

In RANDOM mode, the CD Automatic Changer selects and plays tracks at random, from among the 7 discs in the magazine and the single play tray.

- Selections can be made so that each track would be played only once.

1. **Press the PLAY MODE button and select the random mode.**
The RANDOM indicator lights.

2. **Press the PLAY/PAUSE button on the CD Automatic Changer or CD CONTROL ▶ button on the Remote Controller.**
CD Automatic Changer starts playing tracks at random.

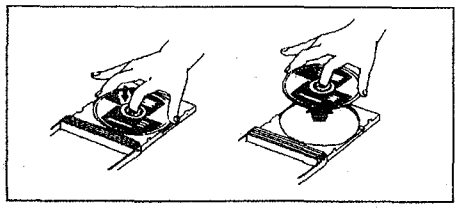
- If you set the CD Automatic Changer to the REPEAT mode by pressing the REPEAT button, even after all tracks have been played once, the CD Automatic Changer will again select and play at random to continue the random playback.

3. **To cancel random playback, press the STOP/CANCEL button.**

To cancel the RANDOM mode:
- Set the CD Automatic Changer to the Stop mode, press the PLAY MODE button, and select another mode.

Handling Compact Discs & The Magazine

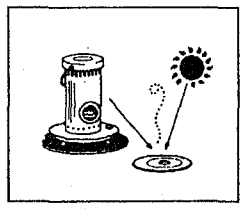
How to handle CDs



When handling compact discs, do not touch the surface of the disc (reflective silver side-the side without the label).

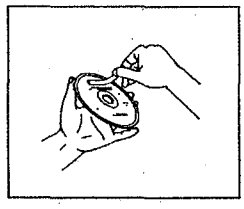
Since compact discs are made of plastic, they are easily damaged. If the disc gets dirty, dusty, scratched or warped, the sound will not be picked up correctly and, in addition, such discs may cause the CD Player-changer to malfunction.

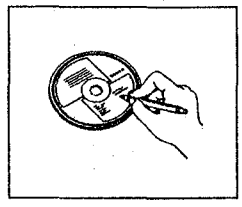
Storage



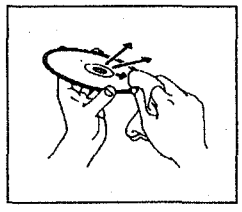
Make sure than the discs are kept in their cases. If the discs are piled, one on top of another, without their protective cases, they can be damaged. Do not put discs in any location where they can be exposed to direct sunlight- or in any place where the humidity or the temperature are high. Avoid leaving discs in your carl

Maintenance of Discs





- Do not damage the label side, or stick paper to, or use any adhesive on this surface.



- When there are fingerprints or other dirt adhering to a disc, wipe the disc with a soft, dry cloth, with a movement going from the inside, outwards.
- If it is difficult to clean, wipe the disc with a cloth moistened with water.
- Never use record cleaners. petrol, alcohol or any anti-static agents.

Recommendations on handling the magazine

1. Always keep the magazine loaded with its six disc trays.
2. When removing or inserting the disc trays, the magazine should be held horizontal.
3. Only load the magazine with compact discs already located on disc tray. Never load a disc directly into the magazine without a disc tray.
4. Do not expose it to high temperatures or to direct sunlight.
5. Do not dismantle the magazine.
6. Take care not to drop or bang the magazine.
   Do not apply any high loadings to the disc trays, particularly when removed from the magazine.
7. Never apply such solvents as petrol or thinner, nor insecticide to the surfaces of the magazine or the disc trays. Such solvents may damage their surfaces.
8. If you wish to use 8 cm (3") CD please obtain the special magazine (XC-M73), designed for these.

Only use compact-discs bearing the mark shown below:

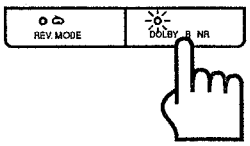
COMPACT
disc
DIGITAL AUDIO

Using the Tape Deck

The tape deck has an Auto Tape Select feature, which can tell the difference between various types of cassette tape. It can distinguish between Normal (Type I) and CrO_2 - High Position (Type II).

Playing a Tape

1. **Press the EJECT button to open the cassette holder.**
2. **Insert a cassette and shut the cassette holder.**
3. **If the tape was recorded with Dolby B noise reduction, press the DOLBY B NR switch.**
   The indicator light will go on.

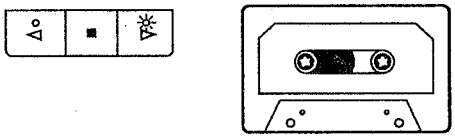


- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

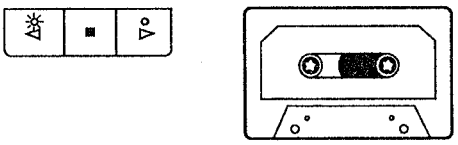
4. **Start playback by either of the following methods:**

- Press the ◁ or ▷ button.

Press the ▷ button if the tape is wound mostly on the left side.



Press the ◁ button if the tape is wound mostly on the right side.



- Select TAPE with the SOURCE SELECTOR button on the amplifier.

Note:
- When cassettes are in both decks A and B, deck B starts first.

Stopping Playback and Ejecting the Tape

1. **Press the STOP button on the tape deck.**

2. **Press the EJECT button to open and remove the tape from the cassette holder.**
3. **Shut the cassette holder.**

Note:
- If the system is turned off while a tape is playing, you may not be able to eject the tape. You will need to turn the system back on and press the EJECT button to open the cassette holder.

Stopping and Restarting Playback

1. **Press the PAUSE button on the tape deck.**

○II

Playback of the tape in deck B stops temporarily.

Note:
- The PAUSE button only applies to deck B.

2. **Press the ◁ or ▷ button.**
   The restarts playback of the tape in deck B.

Changing the Playback Direction

1. **To change the playback direction during playback, press the ◁ or ▷ button.**
   The other side of the tape will now play.
2. **To change the playback direction without starting playback, press the ◁ or ▷ button while also pressing the stop ■ button.**

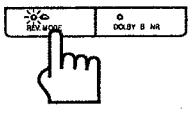
Fast-Winding the Tape

Press the ◀◀ or ▶▶ buttons on the Tape Deck to advance the tape rapidly in the direction of the arrows.

Listening the Tape Continuously

You can set the tape deck up to play both sides of the tapes in decks A and B repeatedly.

1. **Insert cassettes into decks A and B.**
2. **Press the REV. MODE button on the cassette deck so the indicator lights.**



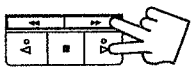
- The tape deck will be placed in auto reverse mode, which means that it will play all of one side of the tape and then all of the other side.

3. **Press the ◁ or ▷ button on deck to be started first.**

- Now both sides of the both tapes will play repeatedly.
- After playback in reverse direction ends, the playing deck (A or B) will be switched to the other deck.
- If the tape deck is not placed in auto reverse mode, only one side of the tapes in deck A and B will play continuously.
- When you select TAPE with the SOURCE SELECTOR on the amplifier, deck B starts first.

Music Scanning

The music scan function will detect the blank segments between tracks. The blank should be about 4 seconds long for the music scan to be effective.



You can locate the beginning of the current track or next track quickly by pressing the playback button and the fast-winding button simultaneously.

Searching for Beginning of the Current Track

- If the tape is traveling in the forward direction, press the ◀◀ fast-winding button while simultaneously pressing the ▷ playback button.
- If the tape is traveling in the reverse direction, press the ▶▶ fast-winding button while simultaneously pressing the ◁ playback button.

Searching for Beginning of the Next Track

- If the tape is traveling in the forward direction, press the ▶▶ fast-winding button while simultaneously pressing the ▷ playback button.
- If the tape is traveling in the reverse direction, press the ◀◀ fast-winding button while simultaneously pressing the ◁ playback button.

Note:
- The deck that is playing will stop if the music scan function is used on the other deck.

The music scan function is not effective:
- When the track being scanned contains an area of low sound level.
- When the blank between tracks is short.
- When there is noise, for example, a hum between tracks.

Recording a Tape

Recording Notes

- Deck A is used for playback only, and deck B is used for both recording and playback.
- To reduce hiss, use the Dolby B noise reduction system. Press the DOLBY B NR button. The indicator light will go on.
- To record on both sides A and B continuously, select reverse mode by pressing the REV. MODE button.
- The recording level is set automatically.
- If the small tabs on cassette tapes which prevent accidental erasure have been removed, the contents of the tape cannot be over-recorded or erased. To record or erase, cover the holes with adhesive tape. The tab in the upper left corner controls the side facing you; and the other tab controls the opposite side.
- If you are recording an AM broadcast and you hear interference, move the BEAT CUT switch on the rear panel of the cassette deck & amplifier unit from Position 1 (the normal mode) to Position 2.

Recording from Various Sources

1. **Insert a cassette for recording into deck B.**
2. **Select the source you are recording from.**
3. **Press the Pause ⏸ button on the tape deck while simultaneously pressing the REC/REC MUTE button.**
   This puts the deck B in REC/PAUSE mode.

4. **Start the source to be recorded.**
5. **Press the Play ◁ or ▷ button on the deck B to start recording.**
   To record on both sides of tape, start recording in the forward (▷) direction.
6. **To stop recording, press the Stop ■ button.**
7. **To stop recording temporarily, press the Pause ⏸ button on deck B.**
   To restart recording again, press the Play button ◁ or ▷.

Dubbing a Tape

Normal-speed Dubbing

1. **Insert the cassette for playback into deck A and the cassette for recording into deck B.**

- The type of tape (Normal or CrO_2) used for recording must be the same as that used for playback.
- With the Dolby system on, tapes are recorded in the same Dolby mode as the pre-recorded tape, regardless of whether the DOLBY B NR button is ON or OFF (the DOLBY B NR indicator remains off while dubbing is in progress.)

2. **Press the Pause ⏸ button while simultaneously pressing the REC/REC MUTE button on deck B.**
   This places deck B in REC/PAUSE mode.
3. **Press the Play button ◁ or ▷ (depending on which side of the tape you want to record from) on deck A.**
4. **Press the Play button ◁ or ▷ (depending on which side of the tape you want to record onto) on deck B.**
   The tape-to-tape recording starts.

Note:

- You cannot listen to another source during normal-speed dubbing.
- To stop normal-speed dubbing before end of either the playback or record tape, press the Stop ■ buttons on decks A and B.

High-Speed Dubbing

1. **Insert the cassette for playback into deck A and the cassette for recording into deck B.**
2. **Press the HIGH SPEED DUBBING button on the Tape Deck.**
   The high-speed tape-to tape recording starts.

Note:

- You can listen to another source while high-speed dubbing is in progress.
- To stop high-speed dubbing before reaching the end of either playback or record tape, press the Stop ■ button on deck B.
- If nearby television is on during high-speed dubbing, beeping noise may be recorded onto the record tape. So turn off the television or move it farther away.

3. **Press the Stop ■ button on deck A when you hear the end of a track to record from many different tapes (for example, to create a "Greatest Hits" tape).**

   Deck A stops playback, and deck B automatically creates about a 4 second blank, then pauses.

Note:

- If you don't want this blank, press the Pause ⏸ button on deck B before pressing the Stop ■ button.

4. **Put another tape in to deck A.**
5. **Press the HIGH SPEED DUBBING button on the Tape Deck.**
   The high-speed dubbing restarts.
6. **To record tracks from other tapes, repeat steps 3-5.**

Note:

- ***It should be noted that it may be unlawful to re-record prerecorded tapes, records, or discs without the consent of the owner of copyright in the sound recording and in any copyright musical or literary work embodied in that recording.***

Erasing a Tape

1. **Insert the tape to be erased into deck B.**

- When you want to erase both sides, press the REV. MODE button so the indicator lights.

2. **Press the Pause ⏸ button while simultaneously pressing the REC/REC MUTE button.**
   This puts the deck in REC/PAUSE mode.
3. **Press the SOURCE SELECTOR button on the amplifier to select the TAPE.**
4. **Press the ◁ or ▷ button (depending on which side of the tape you want to erase) on deck B.**
   The erasure of the tape begins.

Direct Recording from the CD Automatic Changer

Direct recording permits a tape deck to start recording automatically in synchronism with a CD Automatic Changer.

1. **Insert the cassette for recording into deck B.**
- If you wish to record on both sides of the cassette, press the REV. MODE button so the indicator lights.

2. **Set the CD and magazine.**

3. **Press the CD REC START button on the Tape Deck.**

- The CD Automatic Changer and the Tape Deck are activated, and recording begins with the first track of the CD.
- To stop direct recording, press the Stop ■ button on deck B or the STOP/CANCEL button on the CD Automatic Changer.

Note:
- If you press the Disc button, ▶▶| or |◀◀ button during recording, the track to be recorded is changed.

Recording CD Tracks in Auto-Edit Mode

In Auto-Edit mode, tracks from the CD will automatically be selected to determine which tracks should go on side A of the tape and which should go on side B.

The selection is based on the lengths of the tracks and the length of the tape.
This ensures a proper "fit" of the tracks recorded on the tape. It prevents a track from being cut off when the end of the tape is reached.

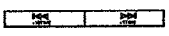
1. **Insert the cassette for recording in deck B.**
- When you want to record both sides of a cassette, select reverse mode by pressing the REV. MODE button so the indicator lights.

2. **Set the CD and magazine.**

3. **Press the STOP/CANCEL button on the CD Automatic Changer.**

4. **Press the EDIT button on the CD Automatic Changer and select the Auto Edit mode.**
The A. EDIT indicator lights.

5. **Enter the length of the tape to be recorded using the ▶▶| and |◀◀ buttons.**

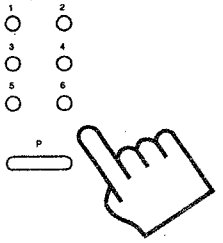


For example: To set a period of 46 minutes, press the ▶▶| button four times and press the |◀◀ button six times.

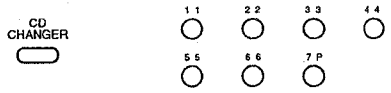
6. **Press the SIDE A/B button.**

- The CD Automatic Changer calculates which tracks should be placed on side A and which should be placed on side B.

7. **Press the Disc button and specify the Disc No. of the disc to be recorded.**



- If you use the Remote Controller, press the CD CHANGER button and then specify one of 1 to P with a numeric key.



- To change the disc, specify the Disc No. of another disc again.
- To start recording the tracks on the selected CD with a track other the first, press the ▶▶| or |◀◀ button on the CD Automatic Changer or press the ⏮ or ⏭ button on the Remote Controller to specify the track with which recording is to start.

8. **Press the MEMORY button on the CD Automatic Changer.**
The Auto Edit program is created automatically.

- The last track to be recorded, the number of steps, and the remaining time of side B of the set tape are shown on the display.
When you press the SIDE A/B button again, the last track of side A of the set tape to be recorded, the number of steps, and the remaining time of the tape are shown on the display.
- To check the Auto Edit contents, press the CALL button. Each time you press the button, the track and step of the displayed side will show on the display.

Note:
- Up to 16 tracks can be allocated for each side of the cassette.

9. **Press the CD REC START button on the Tape Deck.**

- The tape is automatically rewound to the beginning of side A, and then recording begins.
- When the Tape Deck is set in the auto reverse mode, after the last track is recorded on side A, the tape deck high-speed-erases to the end of side A. Then it changes direction to side B and begins recording the remaining tracks.
- To stop recording, press the Stop ■ button on deck B, or press the STOP/CANCEL button on the CD Automatic Changer.

Note:
- **During recording in the Auto-Edit Mode, do not operate the CD Automatic Changer.**

To cancel the Auto-Edit mode, press the STOP/CANCEL button on the CD Automatic Changer, then press the PLAY MODE button.

Recording CD Tracks in Programmed-Edit Mode

You can make your favorite selections from 7 CD and record them on cassette.

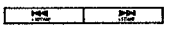
1. **Insert the cassette for recording in deck B.**
- When you want to record both sides of a cassette, select reverse mode by pressing the REV. MODE button so the indicator lights.

2. **Set the CD and magazine.**

3. **Press the STOP/CANCEL button on the CD Automatic Changer.**

4. **Press the EDIT button on the CD Automatic Changer and select the Programmed Edit mode.**
The P. EDIT indicator lights.

5. **Enter the length of the tape to be recorded using the ▶▶| 10 TIME and ▶▶| 1 TIME buttons.**

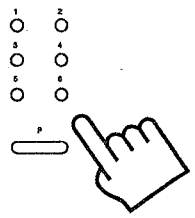


For example: To set a period of 46 minutes, press the ▶▶| 10 TIME button four times and press the ▶▶| 1 TIME button six times.

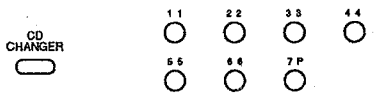
6. **Press the SIDE A/B button.**

- This tells the system that you will be choosing tracks to be recorded on side A of the tape.
- The length of time for one side of the tape is displayed. This is half of the total tape length. The total time for the tracks you choose for each side cannot exceed this time.
- If you do not press the SIDE A/B button, side A is automatically selected.

7. **Press the Disc button and specify the Disc No. of the disc containing the track to be recorded.**

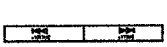


- If you use the Remote Controller, press the CD CHANGER button and then specify one of 1 to P with a numeric key.

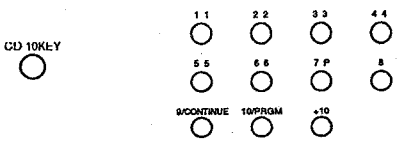


- To change the disc, specify the Disc No. of another disc again.

8. **Press the ▶▶| 10 TIME or ▶▶| 1 TIME button and select the track to be recorded.**



- If you use the Remote Controller, press the CD 10KEY button, then specify a track with a numeric key.



9. **Press the MEMORY button on the CD Automatic Changer.**

- Up to 16 tracks can be allocated for each side of the cassette.
- If the length of a track exceeds the remaining tape length, the time indication blinks on the display. Choose a different track number.
- To delete a track from the program, press the CALL button to display the track to be deleted. Press the STOP/CANCEL button on the CD Automatic Changer.

10. **If you also want to record on the other side of the tape, press the SIDE A/B button and repeat steps 7-9.**

- To check the Programmed Edit contents, press the CALL button. Each time you press the button, the track and step of the displayed side are shown on the display.
To modify a track in the program, press the CALL button, and call the track to be modified. Select a new Disc No. and track, then press the MEMORY button.

11. **Press the CD REC START button on the Tape Deck.**

- The tape is automatically rewound to the beginning of side A, and then recording begins.
- When the Tape Deck is set in the auto reverse mode, after the last track is recorded on side A, the tape deck high-speed-erases to the end of side A. Then it changes direction to side B and begins recording the remaining tracks.
- To stop recording, press the Stop ■ button on deck B, or press the STOP/CANCEL button on the CD Automatic Changer.

To cancel the Programmed-Edit mode, press the STOP/CANCEL button on the CD Automatic Changer, then press the PLAY MODE button.

Note:
- The program cannot be edited during recording. To modify the program, cancel the Programmed-Edit mode, and perform step 4 and subsequent steps.

Note:
- During recording the Programmed-Edit mode, do not operate the CD Automatic Changer.

Creating a Blank During Recording

Use the Record Muting function when you do not want to record a section of the source.

1. **Press the REC/REC MUTE button on the Tape Deck at the beginning of the section you don't want to record.**

A blank of about 4 seconds is created on the cassette, and then the deck pauses.

2. **To start recording again, press the ◁ or ▷ button.**

- To create a blank of more than 4 seconds, hold down the REC.REC MUTE button. When you release this button, the deck pauses.
- When the source you are recording from is the CD Automatic Changer and the CD REC START button is used, the REC/ REC MUTE button will not function.
- The Remote Controller REC button dose not have the REC MUTE function.

Recording with the Timer

The Tape Deck can be set up to record a tape automatically. This is especially useful for recording broadcasts when you are not around, or late at night when you are asleep.

1. **Insert a cassette for recording in to deck B.**
2. **Set the timer, by following the steps in "Setting the Timers".**
3. **Select one of the following sources:**

TUNER TIMER REC	Records TUNER preset stations
- - TIMER REC	Records from the source selected before turning off the system.

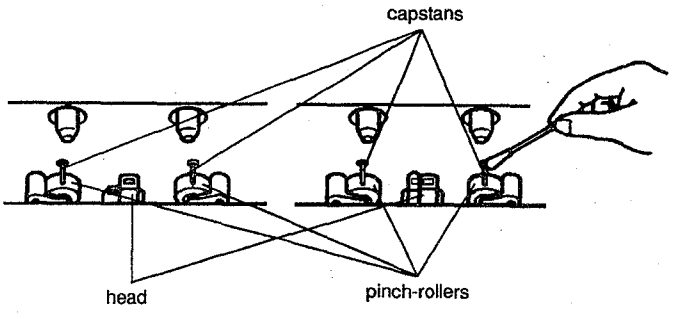
Care and Handling

You must handle your cassette tapes, and tape deck carefully to preserve the full length of their life-times.

- If a tape is loose in its cassette, take up the slack by inserting a pen in one of the reels and rotating it.
  If a tape is loose, it may get stretched, cut, or caught in the cassette.
- Do not touch the tape surface.
- Do not store the tape:
  — In dusty places
  — In direct sunlight or heat
  — In moist areas
  — On a TV or speaker
  — Near a magnet
- The use of C-120 or thinner tape is not recommended.

Tape Deck

- If the head, capstans, or pinch-rollers of the tape deck become dirty, the following may occur:
  — Impaired sound quality
  — Discontinuous sound
  — Fading
  — Incomplete erasure
  — Impossible to record
- Clean the head, capstans and pinch-rollers with a cotton swab moistened with alcohol.



Using the Tuner

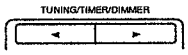
Listening the Broadcasts

The tuner can receive FM and AM broadcasts. Stations can be tuned in manually, automatically, or from preset memory storage.

Manual Tuning

1. **Select the broadcast band you want to tune in by pressing the FM or AM button on the Tuner.**

2. **Press the TUNING/TIMER/DIMMER button (◄ or ►) to tune in a station.**



3. **Hold down the TUNING/TIMER/DIMMER button to change the frequency rapidly, then tap the button to set the frequency precisely.**

Automatic Tuning

1. **Select the broadcast band you want to tune in by pressing the FM or AM button on the Tuner.**
2. **Hold down the TUNING/TIMER/DIMMER button (◄ or ►) for a moment, and then release the button.**

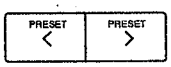
- When a station is tuned in, the TUNED indicator lights up.

Note:
- The Tuner will tune in the nearest strong station.

Presetting Stations in Memory

You can store up to 40 of your favorite radio stations (FM and AM) in memory, giving you quick, easy access to the stations.

1. **Select a band by pressing either the FM or AM button on the Tuner.**
2. **Press the TUNING/TIMER/DIMMER button (◄ or ►) to tune in a station.**
3. **Press the MEMORY button on the Tuner.**
   The "MEMORY" indicator on the Tuner display blinks for 5 seconds.
4. **Press the PRESET button (< or >) on the Tuner to assign a number (1-40) to the station, or enter a number (1-40) with the Remote Controller's numeric keypad.**



Example:
To enter 7, press "7".
To enter 17, press "+10", then "7".
To enter 20, press "+10", then "10"

- Before using the numeric keypad, press the TUNER button. This will allow you to use the numeric keypad in the Tuner mode.
- If the "MEMORY" indicator has stopped blinking, press the MEMORY button again and repeat step 4.
- If the preset number you chose already has a station assigned to it, the old station will be replaced by the new one.

5. **Press the MEMORY button again.**
   This stores that station in memory, with the preset number (1-40) you chose in step 4.
6. **Repeat steps 1-5 for each station you want to store in memory with a preset number.**

Caution! If the system is unplugged or if a power failure occurs, the preset stations stored in memory may be lost.

Cancelling Preset Stations

1. **Press the CANCEL button on the Tuner.**
   The "CANCEL" light on the Tuner display blinks for 5 seconds.

2. **Press the PRESET button (< or >) on the Tuner to select the preset station you want to cancel.**
   If the "CANCEL" light has stopped blinking, press the CANCEL button again and repeat step 2.
3. **Press the CANCEL button again.**
   The preset station will be cancelled.

Tuning in Preset Stations

- Press the PRESET button (< or >) on the Tuner to select the preset station you want. The preset station numbers are displayed sequentially each time you press the PRESET button.
- You can also select a station by entering its preset number on the Remote Controller's numeric keypad.
- Before using the numeric keypad, press the TUNER button. This will allow you to use the numeric keypad in the Tuner mode.

FM Reception Modes

There are two FM reception modes: AUTO and MONO.

AUTO: Stations are tuned in with either STEREO or MONO, depending on the FM signal.
MONO: Stations are tuned in with MONO only. This will reduce interference noise of weak stations and make the reception sound better.

1. **Press the FM MODE/ MUTE button on the Tuner to switch between the AUTO and MONO reception modes.**

2. **Press the FM MODE/MUTE button on the Tuner to the AUTO mode to receive the station in stereo.**

- If a stereo broadcast is received when the FM band is selected, the "STEREO" light will be displayed on the Tuner.
- If the FM Reception Mode is MONO, the "STEREO" light will not be displayed.

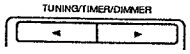
Using the Timers

Setting the Clock

The clock will be displayed even when the system is turned off. Pressing the TUNING/TIMER/DIMMER button (◄ or ►) will switch between two brightness levels for the clock.

1. **Press the CLOCK ADJUST button on the Tuner.**
   The hours digits blink.

2. **Press the TUNING/TIMER/DIMMER button (◄ or ►) to set the hours digit.**



- Press the ► button to increase the hour, and press the ◄ button to decrease the hours.
- To enter a new hour digit, press the CANCEL button and repeat step 2.

3. **Press the MEMORY button on the Tuner.**

This sets the hour portion of the time.

The minutes digits will blink.

4. **Press the TUNING/TIMER/DIMMER button (◄ or ►) to set the minutes digit.**

- It's a good idea to set the minutes digits one minute ahead. Then you can start the clock when it reaches the set time exactly (according to the correct time from the TV, radio, or telephone).
- To enter a new minute digit, press the CANCEL button and repeat step 4.

5. **Press the MEMORY button.**
   The clock starts as soon as you press the MEMORY button.

Caution! If there is a power failure, or if you unplug the stereo, the clock time will be lost. Repeat steps 1-5 when power is restored.

- Using the TUNING/TIMER/DIMMER button to change luminosity of time display by two steps under STANDBY status.
  ► : Increases luminosity
  ◄ : Decreases luminosity

Setting the Timers

With the timers you can make tape recordings of broadcasts, CD's, or tapes when you're not around. You can also play these music sources at specified times without recording them.

- Use TIMER 1 and TIMER 2 record a radio broadcast when you're not home, or late at night when you're asleep.
- Use the DAILY timer to record a broadcast that occurs at the same time every day.
- The procedure for setting TIMER 1, TIMER 2 and the DAILY timer is the same. You need to tell the system:
  — The name of the timer (TIMER 1 , TIMER 2, or DAILY).
  — The time the timer should turn the system on.
  — The time the timer should turn the system off.
  — The source the timer should turn on (Tuner, CD, or Tape).
  — The volume level that should be used during recording or playback.

Note:
- The clock must be set to the correct time for the timers to be effective.

Caution! Do not operate the remote controller when you are programming the timer.

Choosing a Timer

Press the TIMER 1, TIMER 2, or DAILY button on the Tuner to select a timer. This puts the system in the Timer Setting mode. The information that the system expects next will blink on the display.

Setting the Start Time

1. **Press the TUNING/TIMER/DIMMER buttons to set the hour that the system will turn on.**

   The ◄ button makes the hour number decrease, and the ► button makes the hour number increase.

2. **Press the MEMORY button.**
   This stores the hour portion of the start-time in memory.

3. **Press the TUNING/TIMER/DIMMER buttons to set the minute.**

4. **Press the MEMORY button.**
   This stores the minute portion of the start-timer in memory.

Setting the Stop Time

1. **Press the TUNING/TIMER/DIMMER buttons to set the hour that the system will turn off.**

2. **Press the MEMORY button.**
   This stores the hour portion of the stop-time in memory.

3. **Press the TUNING/TIMER/DIMMER buttons to set the minute.**

4. **Press the MEMORY button.**
   This stores the minute portion of the stop time in memory.

Selecting the Source

1. **Press the TUNING/TIMER/DIMMER button to select a source.**

   Repeatedly pressing the ► button displays the sources in the following order:

Display	What it means
– – – – – – – – –	Plays from whichever source was used just before turning off the system
TUNER	Plays FM or AM broadcast
TUNER TIMER REC	Records FM or AM broadcast
CD	Plays a CD
TAPE	Plays a tape
– – – – TIMER REC	Records from whichever source was used just before turning off the system

Note:
- If you choose an FM or AM radio station as the source, select the preset station by pressing the PRESET button on the Tuner.

2. **Press the MEMORY button.**
   This stores the source to play or record in memory.

Setting the Volume

1. **Press the TUNING/TIMER/DIMMER button to select a volume level.**
   Repeatedly pressing the ► button displays the volume levels in the following order.:

Display	What it means
VOL – – – –	Volume set to the level used before shut the power off.
VOL – – 0	Volume off
VOL – – A	Volume barely on
VOL – – B	Volume at about a 1/4 turn of the volume knob
VOL – – C	Volume at about a 1/3 turn of the volume knob

Note:
- If the volume knob has already been turned half a turn or more when you set the volume level, you may not be able to set it to volume position 0, A, B, or C correctly.

2. **Press the MEMORY button.**
   This stores the volume level for timed playback or recording in memory. To change your selection, press the CANCEL button and enter a new value.

Starting the Timer

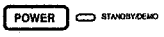
Press the Timer button to start the timer. The timer you chose should light on the display.

Note:
- If the timer light does not light, the timer was not set properly, and you need to set the start time again.

To change your selection, press the CANCEL button and enter a new value.

Turning the System Off

Press the POWER button on the amplifier to turn the system off.



- The system is now programmed to turn on at the preset start-time, and play or record until the stop-time.
- It will record or play the preset source at the preset volume level until the top-time is reached.
- If you turn the system on before the start-time, the timer will still operate as programmed at the start-time.

Resetting the Timers

To reset a timer, press the button (TIMER 1, TIMER 2, or DAILY) on the Tuner twice. Now the timer is set again and will use the same start-time, stop-time, source, and volume level as before.

Setting the Wake-Up and Sleep Timer

You can set a timer so it turns on to wake you up or turns off when you go to sleep.

Setting the Wake-Up Timer

The wake-up timer serves as an alarm clock. It turns the system on after a programmed time lapse and plays the source that was used before the system was turned off. You can set a wake-up time from between 5 minutes and 12 hours.

1. **Press the POWER switch on the amplifier so it is off.**
2. **Press the WAKE UP/SLEEP button on the Tuner.**
   This tells the system that you are going to set the wake-up time.
3. **Press the WAKE UP/SLEEP button repeatedly until the desired wake-up time appears.**

- Each time you press the WAKE UP/SLEEP button, the wake-up time lapse changes in the following order:

  →0:05→0:10→0:15→0:30→0:45→1:00→1:30→2:00→3:00→(every hour)→12:00→ (back to the beginning)

- If you make a mistake, press the CANCEL button on the Tuner and enter a new wake-up time with the WAKE UP/SLEEP button.

The system will now turn on after this time lapse.

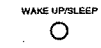
- The wake-up timer has priority over TIMER 1, TIMER 2, and the DAILY timer.
  This means that if the start-time for one of the timers occurs before the wake-up time, the system will wait until the wake-up time to turn on.

Note:
- If CD is the source that will be used, playback begins with the first track.

Setting the Sleep Timer

The sleep timer is used to turn off the system after a specified time lapse. With this timer you can fall asleep listening to music, knowing that the system will shut off automatically and not stay on all night. You can set the sleep timer to turn the system off from between 5 minutes and 2 hours.

1. **Press the POWER switch on the Amplifier so it is on.**
2. **Start the source you want to listen to.**
3. **Press the WAKE UP/SLEEP button on the Tuner.**



   This tells the system that you are going to set the sleep time.

4. **Press the WAKE UP/SLEEP button repeatedly until the desired sleep time appears.**

   Each time you press the WAKE UP/SLEEP button, the sleep time lapse changes in the following order:

   →0:05→0:10→0:15→0:30→0:45→1:00→1:15→1:30→1:45→2:00→ (back to the beginning)

- If you make a mistake, press the CANCEL button on the Tuner and enter a new sleep time with the WAKE UP/SLEEP button.

The system will now turn off after this time lapse.

- The sleep timer has priority over TIMER 1, TIMER 2 and the DAILY timer.

This means that if the stop-time for one of the timers occurs before the sleep time, the system will wait until the sleep time before turning itself off.

Checking the Remaining Time

After setting the wake-up or sleep timer, you can check the time remaining until the system turns on (wake-up time) or shuts off (sleep time).

Press the WAKE UP/SLEEP button.

The remaining time is displayed for 5 seconds. Then the clock time appears again.

Adding More Time

If you want more time before the wake-up timer turns the system on (or the sleep timer turns the system off), follow these steps:

1. **Press the WAKE UP/SLEEP button.**
   The remaining time is displayed for 5 seconds. Then the clock time appears again.
2. **Press the WAKE UP/SLEEP button again before the clock time is displayed.**

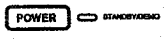
- Keep pressing this button until the desired additional time is reached.

Now the system will wait until the added amount of time until turning on or shutting off.

Cancelling the Time Setting

If you decide you don't want the system to wake you up or play music while you fall asleep, you can turn these timers off.

1. **To cancel the wake-up timer, press the POWER button on the Amplifier.**
   This turns the power on.



2. **To cancel the sleep timer, press the POWER button on the Amplifier.**
   This turns the power off.

Using the Remote Controller

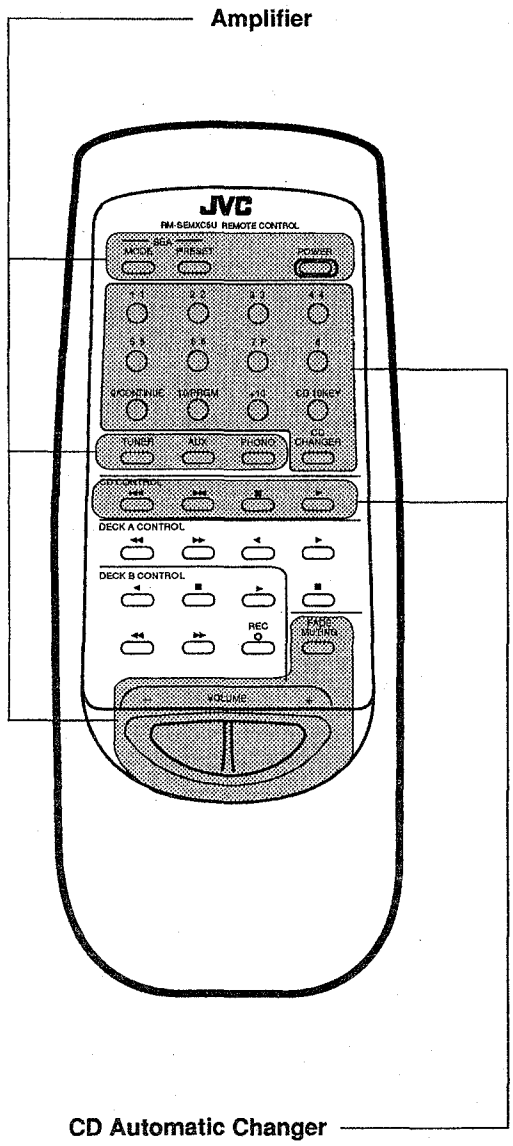
Operating the Remote Controller

You can use the Remote Controller to operate the system without leaving your chair. You can use it up to a distance of 23 feet.

Point the Remote Controller at the remote sensor on the Amplifier.

Note:

- When the Tuner is selected as the source, and Cd OFF is displayed, only the PLAY button on the Remote Controller can be used.
  To use other buttons on the Remote Controller (for programming and other operations), select CD with the SOURCE SELECTOR, or press the CD PLAY button on the Remote Controller first.

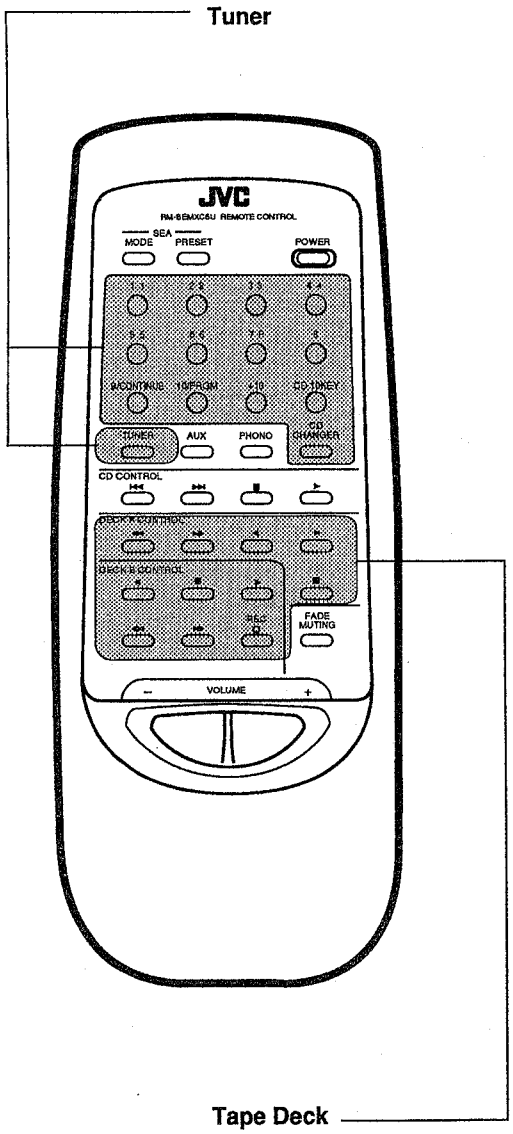


Amplifier

Turn on the main unit	POWER
Adjust volume level	VOLUME
Gradually reduce the volume to zero	FADE MUTING
Set the SOURCE SELECTOR of the amplifier to TUNER	TUNER
Set the SOURCE SELECTOR of the amplifier to AUX/VIDEO	AUX
Set the SOURCE SELECTOR of the amplifier to PHONO	PHONO
Select the SEA MODE	MODE
Select the SEA preset pattern	PRESET

CD Automatic Changer

Play a CD	▶
Stop playback of a CD	■
Set the numeric keys to the DISC mode	CD CHANGER
Select the Disc No.	1 1 2 2 3 3 4 4 5 5 6 6 7 P
Place numeric keys in CD mode	CD 10KEY
Select track number	1 1 2 2 3 3 4 4 5 5 6 6 7 P 8 9/CONTINUE 10/PRGM +10
Scanning through the track number	⏮ , ⏭



Change the PLAY MODE of the CD Automatic Changer to CONTINUOUS mode after press the CD CHANGER button — 9/CONTINUE

Change the PLAY MODE of the CD Automatic Changer in PROGRAM mode after press the CD CHANGER button — 10/PRGM

Tape Deck

DECK A

Play a tape in forward direction	▶
Play a tape in reverse direction	◀
Stop playback	■
Fast forwarding or fast rewinding	◀◀ , ▶▶

DECK B

Play a tape in forward direction	▶
Play a tape in reverse direction	◀
Stop playback	■
Fast forwarding or fast rewinding	◀◀ , ▶▶
Recording in forward direction	REC + ▶
Recording in reverse direction	REC + ◀
Stopping recording	■

Tuner

Selecting Tuner mode	TUNER
Selecting a preset station	1 1 2 2 3 3 4 4 / 5 5 6 6 7 8 / 9/CONTINUE 10/PRGM +10

Note:
- Where "+" is indicated, press and hold the first button illustrated, then press the second.

Troubleshooting

Sympton	Possible Cause	Action
No sound is heard.	Speakers are connected incorrectly.	Re-connect speakers (See "Connecting the System Component")
Impossible to record.	Tape tabs are broken out.	Cover tabs with adhesive tape.
Interference during broadcast.	Antenna is disconnected. The loop antenna is too close to the system.	Re-connect the antenna securely. Change the position and direction of the loop antenna.
CD Sound is discontinuous.	The CD is scratched or stained.	Clean or replace the CD.
The Remote Controller cannot be operated.	There is an obstruction blocking the remote sensor on the amplifier. The batteries of the Remote Controller are weak.	Remove the obstruction. Replace the batteries.
The magazine does not eject when the EJECT button is pressed.	The power is off. The magazine has not been inserted correctly.	Turn on the system. Push the magazine all the way in and try pressing the EJECT button again.
A selection on a CD was not played.	The CD is in the tray upside down.	Put the CD in the tray with the label side facing up.
Operations are disabled.	The built-in microprocessor may malfunction due to external electrical interference.	Unplug the system, then plug it back in.
The cassette holder cannot be opened.	The system was turned off because the timer was operated while the tape was running.	Turn on the system.

Specifications

Double Cassette Amplifier

AMPLIFIER SECTION	
Output Power	**30 watts per channel, min. RMS, both channels driven into 8 ohms, from 40Hz to 20kHz with no more than 0.9% total harmonic distortion.**
Total Harmonic Distortion at Half-Rated Power	0.07%
Input Sensitivity/ Impedance (1kHz)	
AUX/VIDEO	250mV/47 k ohms
PHONO	3mV/47 k ohms
Pre-programmed SEA settings	51 (5 modes x 10 patterns + FLAT mode)
CASSETTE DECK SECTION	
Frequency Response	
CrO_2:	30 - 16,000Hz
Normal:	30 - 15,000Hz
Wow and Flutter (WRMS)	0.09%
Dimensions (W x H x D)	10-7/8 x 7-1/4 x 12-5/16 inches (275 x 183.5 x 312 mm)
Weight	12.3 lbs (5.6 kg)

CD Automatic Changer/Tuner

CD AUTOMATIC CHANGER SECTION	
CD capacity	7 discs
Dynamic Range	96 dB
Signal-to-Noise Ratio	102 dB
Wow and Flutter	Unmeasurable
TUNER SECTION	
FM	
Tuning range	87.5 MHz - 108.0 MHz
Usable Sensitivity	0.95µV/75 ohms (10.8dBf)
Signal-to-Noise Ratio (IHF-A Weight)	
MONO	80 dB
STEREO	73 dB
AM	
Tuning range	530 kHz - 1,710 kHz
Dimensions (W x H x D)	10-7/8 x 7-1/4 x 12-1/4 inches (275 x 183.5 x 311 mm)
Weight	9.3 lbs (4.2 kg)

General

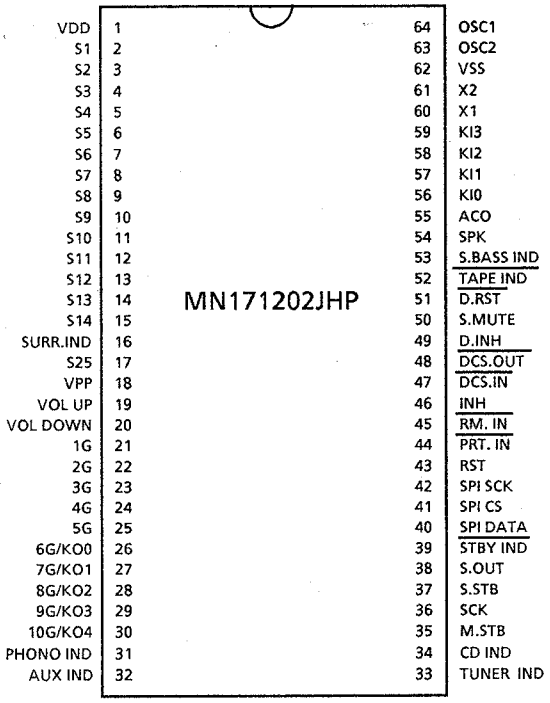
Power Requirements	AC 120 V ∿ 60 Hz
Power Consumption	105 W
Accessories	FM Antenna Cable ..... 1 AM Loop Antenna ..... 1 MAGAZINE ..... 1 Remote Control Unit ..... 1 Batteries ..... 2 (UM-4/AAA (24F)/R03)

Design and specifications subject to change without notice.

Description of ICs

■ MN171202JHP (IC901) : System controller

1.Terminal Layout



2.KEY Matrix

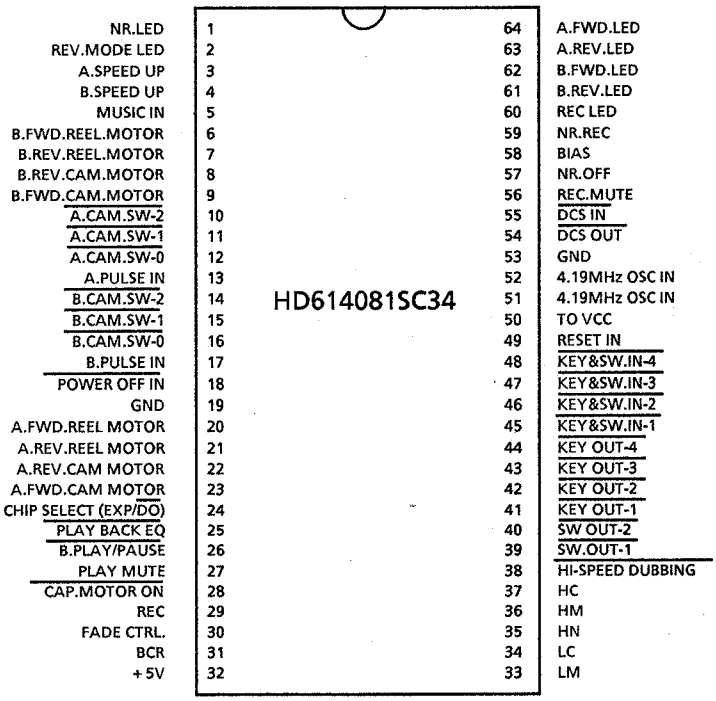
	KEY IN 0 (PIN56)	KEY IN 1 (PIN57)	KEY IN 2 (PIN58)	KEY IN 3 (PIN59)
KEY OUT 0 (PIN26)	MSEC	FLAT	DEMO	DISPLAY
KEY OUT 1 (PIN27)	PATTERN ▶	PATTERN ◀	POWER	—
KEY OUT 2 (PIN28)	MODE ▲	MODE ▼	—	—
KEY OUT 4 (PIN30)	SOURCE ◀	SOURCE ▶	—	—

3.Terminal Description

Pin NO.	Symbol	I/O	Function and Operations	Pin NO.	Symbol	I/O	Function and Operations
1	VDD	--	Power supply	33	TUNER IND	O	Indication signal output
2	S1	O	Segment control signal	34	CD IND	O	Indication signal output
3	S2	O	Segment control signal	35	M.STB	O	Strobe signal for IC662(Tone selector)
4	S3	O	Segment control signal	36	SCK	O	Clock output for IC662 and IC601
5	S4	O	Segment control signal	37	S.STB	O	Strobe signal for IC601(Source selector)
6	S5	O	Segment control signal	38	S.OUT	O	Data for IC601 and IC662
7	S6	O	Segment control signal	39	STBY IND	O	Indication signal output
8	S7	O	Segment control signal	40	SPI DATA	I/O	Peak level data / Control data for IC951
9	S8	O	Segment control signal	41	SPI CS	O	Chip select signal for IC951
10	S9	O	Segment control signal	42	SPI SCK	O	Clock output for IC951
11	S10	O	Segment control signal	43	RST	I	Reset signal input
12	S11	O	Segment control signal	44	PRT. IN	I	Detection for protector
13	S12	O	Segment control signal	45	RM. IN	I	Remote control signal input
14	S13	O	Segment control signal	46	INH	I	Inhibit signal input
15	S14	O	Segment control signal	47	DCS IN	I	Compulink signal input
16	SURR.IND	--	Non connection	48	DCS OUT	O	Compulink signal output
17	S25	O	Segment control signal	49	D.INH	O	Power control signal to deck controller
18	VPP	--	Power supply for fl display	50	S.MUTE	O	Muting signal when changing the input
19	VOL UP	O	Volume control signal	51	D.RST	O	Reset signal for deck controller
20	VOL DOWN	O	Volume control signal	52	TAPE IND	O	Indication signal for 'TAPE'
21	1G	O	Grid control signal	53	S.BASS IND	O	Indication signal for 'SUPER BASS'
22	2G	O	Grid control signal	54	SPK	O	Speaker relay control signal
23	3G	O	Grid control signal	55	ACO	O	Regulator control signal
24	4G	O	Grid control signal	56	KI0	I	Key martrix input
25	5G	O	Grid control signal	57	KI1	I	Key martrix input
26	6G/KO0	O	Grid control signal (Key matrix out)	58	KI2	I	Key martrix input
27	7G/KO1	O	Grid control signal (Key matrix out)	59	KI3	I	Key martrix input
28	8G/KO2	O	Grid control signal (Key matrix out)	60	X1	--	Connected to GND
29	9G/KO3	O	Grid control signal (Key matrix out)	61	X2	--	Non connection
30	10G/KO4	O	Grid control signal (Key matrix out)	62	VSS	--	GND
31	PHONO IND	O	Indication signal output	63	OSC2	--	Oscillation terminal
32	AUX IND	O	Indication signal output	64	OSC1	--	Oscillation terminal

■ HD614081SC34 (IC491) : Deck controller

1.Terminal Layout



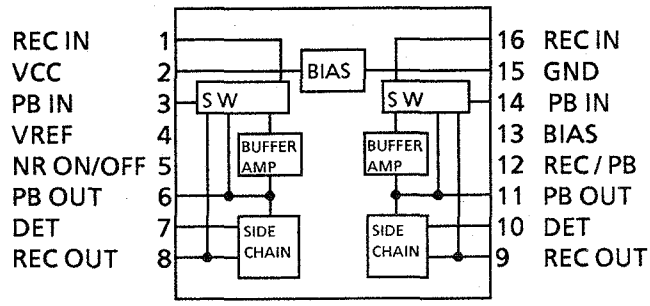
2.Key Matrix

	KEY IN 1 (PIN45)	KEY IN 2 (PIN46)	KEY IN3 (PIN47)	KEY IN4 (PIN48)
KEY OUT 1 (PIN41)	A◀	A◀◀	A▶▶	A▶
KEY OUT 2 (PIN42)	B◀	B◀◀	B▶▶	B▶
KEY OUT 3 (PIN43)	A■	B■	B●	B❚❚
KEY OUT 4 (PIN44)	A▶▶B	DOLBY	REV. MODE	CD.REC
SW OUT 1 (PIN39)	A CrO_2	B CrO_2	—	—
SW OUT 2 (PIN40)	B PACK	REV REC	FWD REC	A PACK

3.Terminal Description

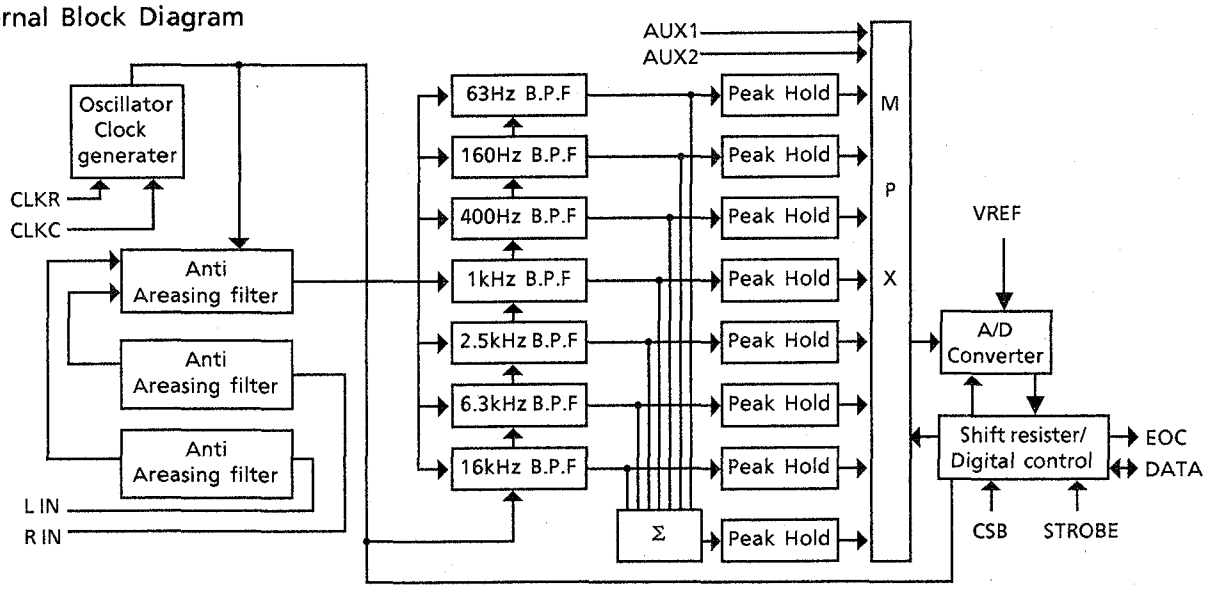
Pin NO.	Symbol	I/O	Function and Operations	Pin NO.	Symbol	I/O	Function and Operations
1	NR.LED	O	NR indication signal output	33	LM	O	Rec. EQ control (Normal speed / Metal)
2	REV.MO.LED	O	Reverse mode indication signal output	34	LC	O	Rec. EQ control (Normal speed / CrO_2)
3	A.SPEED UP	O	Deck A reel speed control signal output	35	HN	O	Rec. EQ control (High speed / Normal)
4	B.SPEED UP	O	Deck B reel speed control signal output	36	HM	o	Rec. EQ control (High speed / Metal)
5	MUSIC IN	I	Music scan signal input	37	HC	O	Rec.EQ control (High speed / CrO_2)
6	B.FWD REEL	O	Deck B reel motor control signal (forward)	38	HI-SPEED	O	Capstan&EQ control (High speed dubbing)
7	B.REV.REEL	O	Deck B reel motor control signal (reverse)	39	SW OUT-1	O	Leaf switch signal output
8	B.REV.CAM	O	Deck B cam motor control signal (reverse)	40	SW-OUT-2	O	Leaf switch signal output
9	B.FWD.CAM	O	Deck B cam motor control signal (forward)	41	KEY OUT-1	O	Key matrix output
10	A.CAM SW-2	I	Cam switch signal from Deck A	42	KEY OUT-2	O	Key matrix output
11	A.CAM SW-1	I	Cam switch signal from Deck A	43	KEY OUT-3	O	Key matrix output
12	A.CAM SW-0	I	Cam switch signal from Deck A	44	KEY OUT-4	O	Key matrix output
13	A.PULSE IN	I	Deck A reel pulse input	45	KEY&IN-1	I	Key matrix & leaf switch input
14	B.CAM SW-2	I	Cam switch signal from Deck B	46	KEY&IN-2	I	Key matrix & leaf switch input
15	B.CAM SW-1	I	Cam switch signal from Deck B	47	KEY&IN-3	I	Key matrix & leaf switch input
16	B.CAM SW-0	I	Cam switch signal from Deck B	48	KEY&IN-4	I	Key matrix & leaf switch input
17	B PULSE IN	I	Deck B reel pulse input	49	RESET IN	I	Reset signal from system controller
18	POWER OFF IN	I	Power off signal input	50	TO VCC	--	Connected to +5V
19	GND	--	Ground	51	OSC	--	Clock oscillation
20	A.FWD.REEL	O	Deck A reel motor control signal (forward)	52	OSC	--	Clock oscillation
21	A.REV.REEL	O	Deck A reel motor control signal (reverse)	53	GND	--	Ground
22	A.REV.CAM	O	Deck A cam control signal (reverse)	54	DSC OUT	O	Compulink signal output
23	A.FWD.CAM	O	Deck A cam control signal (forward)	55	DCS IN	I	Compulink signal input
24	CHIP SELECT	--	Connected to GND	56	REC.MUTE	O	Recording mute control signal
25	PLAYBACK EQ	O	Playback equalizer control signal	57	NR.OFF	O	NR on/off control signal
26	B.PLAY/PAUSE	O	Deck A / B select signal	58	BIAS	O	Bias circuit on/off control signal
27	PLAY MUTE	O	This terminal is low during playback	59	NR.REC	O	NR rec/play control signal
28	CAP.MOTOR	O	Capstan motor on/off control signal	60	REC LED	O	Recording indication signal
29	REC	O	Recording control signal	61	B.REV LED	O	Deck B reverse LED indication signal
30	FADE CONT.	--	Non connection	62	B.FWD LED	O	Deck B forward LED indication signal
31	BCR	O	Bias current control signal (CrO_2 : H)	63	A.REV LED	O	Deck A reverse LED indication signal
32	+5V	--	Power supply (+5V)	64	A.FWD LED	O	Deck A forward LED indication signal

■ HA12136A (IC351) : Noise Reduction Amplifier

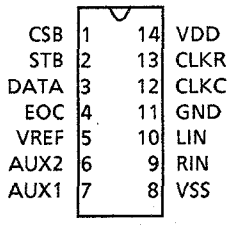


■ XR1097CP(IC951) : 7-channel graphic equalizer filter with A/D converter

1.Internal Block Diagram



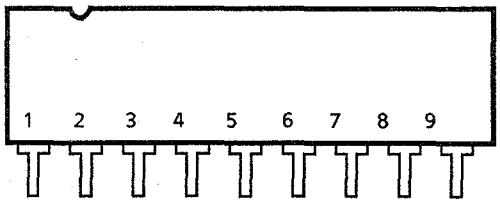
2.Terminal Layout



3.Terminal Description

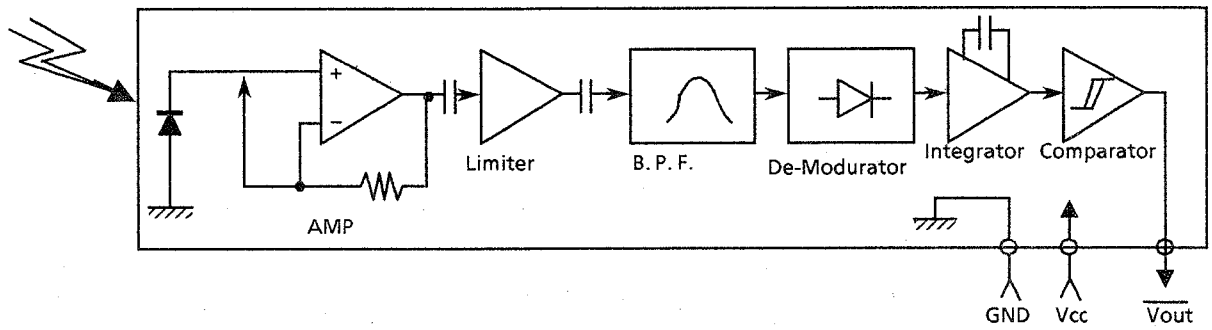
Pin No	Symbol	I/O	Function	Pin No	Symbol	I/O	Function
1	CSB	I	Chip select	8	VSS	--	-5V
2	STB	I	Strobe signal	19	RIN	I	Sound signal input
3	DATA	I/O	Data input / output	10	LIN	I	Non connection
4	EOC	--	Not used	11	GND	--	GND
5	VREF	I	A/D converter reference voltage	12	CLKC	--	A capacitor is connected
6	AUX2	I	Non connection	13	CLKR	--	A resister is connected
7	AUX1	I	Non connection	14	VDD	--	+5V

■ BA6218 (IC451,452,453,454) : Reversible motor driver

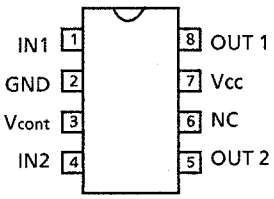


Pin 3(IN)	Pin 1(IN)	Pin 7(OUT)	Pin 9(OUT)
H	L	L	H
L	H	H	L
H	H	L	L
L	L	OPEN	OPEN

■ SPS-420-1 (IC922) : Receiver for Remote Controller

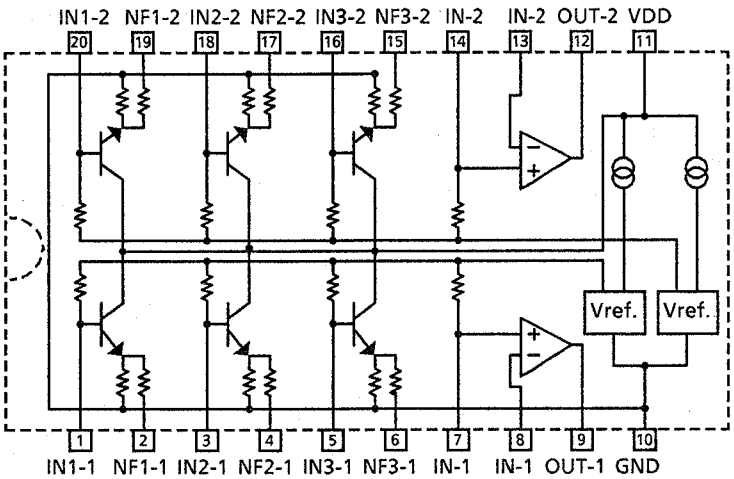


■ LB1639-CV (IC972) : Motor Driver



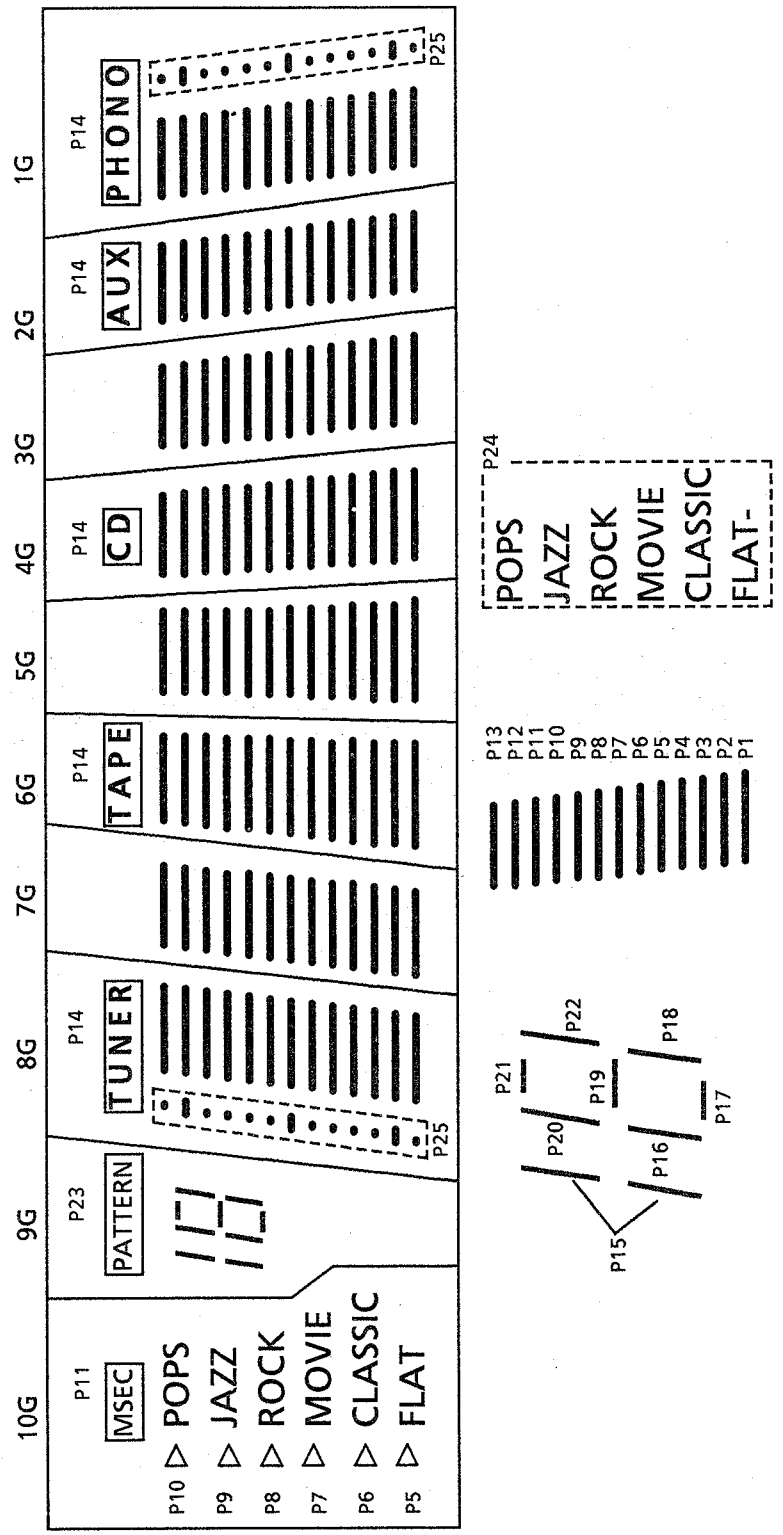
IN 1	IN 2	OUT 1	OUT 2	MOTOR
H	L	H	L	CLOCKWISE
L	H	L	H	COUNTER-CLOCKWISE
H	H	OFF	OFF	WAITING
L	L	OFF	OFF	WAITING

■ M5243P (IC661) : S.E.A. Graphic Equalizer



Internal Connections of the FL Display

ELU0001-146 (FL901)



2.Pin Connection

Terminal No	1	2	3	4	5	6	7	8	9	10	11	12	13	14										
ELECTRODE	F1	F1	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10										
Terminal No	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
ELECTRODE	P11	P12	P13	P14	NP	P23	P22	P21	P20	P19	P18	P17	P16	P15	NP	P24	P25	NP	NP	NP				
Terminal No							35	36	37	38	39	40	41	42	43	44	45	46	47	48				
ELECTRODE							10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	F2	F2				

Note : F:Filament NP:No Pin G: Grid P: Anode

Disassembly Procedures

■ Removing the metal cover
1. Remove the 2 screws fastening both sides of the metal cover and 4 screws fastening the rear side.
2. Lift the back of the metal cover spreading both sides to remove.

■ Removing the front panel assembly
1. Remove the metal cover.
2. Cut the tie bands Ⓔ and Ⓕ (Fig. 3,4).
3. Remove the screw Ⓐ.
4. Remove the volume knob and the nut fastning the volume.
5. Disconnect the connectors P331, P332, P333, P334 (Cassette deck CB), P321 (Head phone CB), P612 (Input selector CB) and the flat wire JB901 (System control CB) and P972 (Main volume CB) (Fig. 2, 3,4).
6. Release the 3 hooks Ⓓ to remove the front panel assembly from the chassis, and remove the main volume circuit board from the front pannel (Fig. 1).

■ Removing the heat sink cover.
1. Remove the 2 screws Ⓗ (Fig. 5).
2. Remove the cover.

■ Removing the rear panel
1. Remove the metal cover.
2. Remove the heat sink cover.
3. Remove the screws Ⓖ (Fig. 5).
4. Release the both hooks to remove the rear panel (Fig. 3,4).

■ Removing the Power IC
1. Remove the metal cover.
2. Remove the rear panel.
3. Remove the 2 circuit boards (ENJ-063-4,ENJ-063-2) with heat sink.
4. Remove the defective IC.

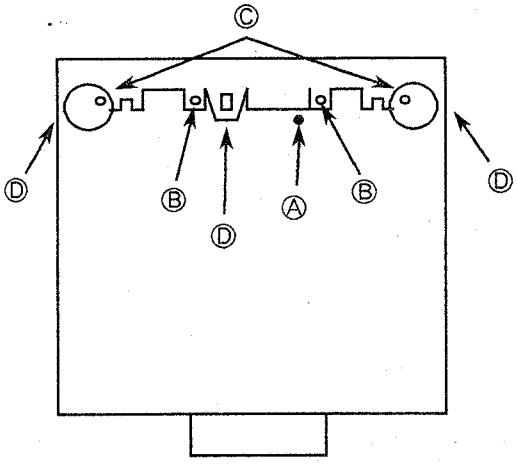


Fig. 1 Bottom view

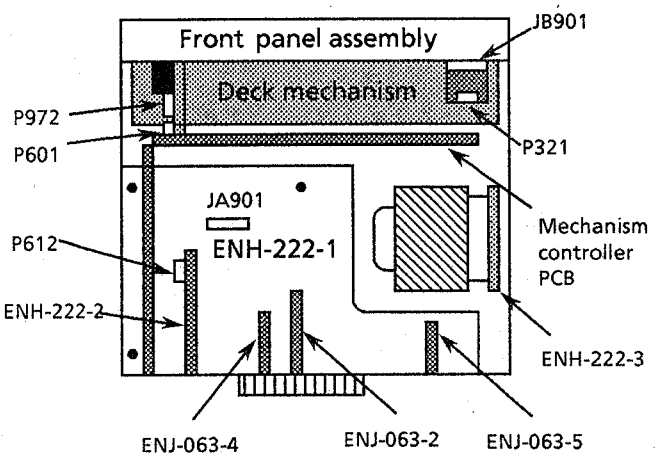


Fig. 2 Top view

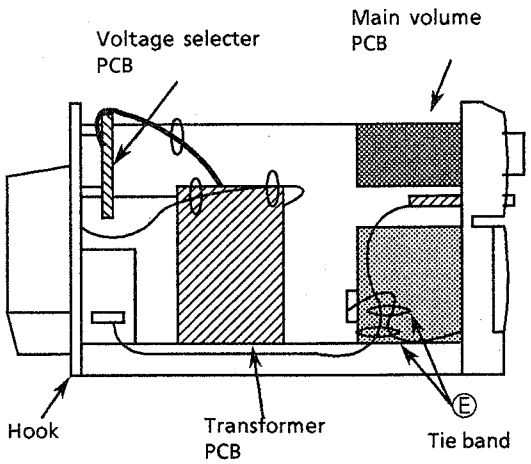


Fig. 3 Left side view

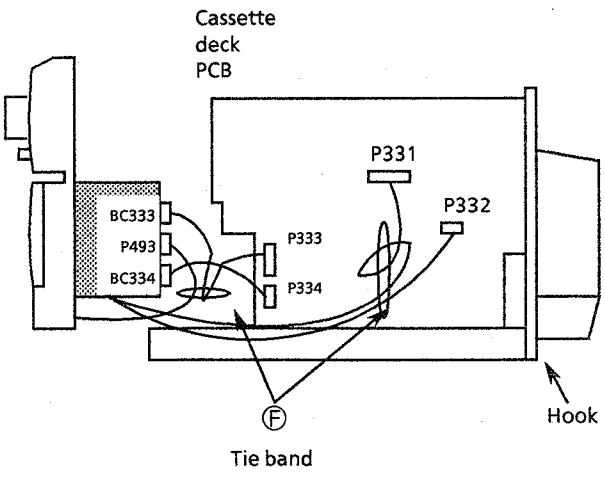


Fig. 4 Right side view

■ Removing the front circuit board assembly
1. Remove the metal cover.
2. Remove all the knobs.
3. Remove the front panel assembly.
4. Remove the screw Ⓘ to remove the headphone circuit board (ENB-165-6).
5. Remove the 8 screws Ⓙ fixing the assembly (Fig. 6).
   The fasteners can be released.

■ Removing the mechanism assembly
1. Remove the metal cover.
2. Remove the front panel assembly.
3. Disconnect the connectors P492,493 (Fig.6).
4. Remove the 8 blue colored screws Ⓚ and Ⓜ fixing the mechanism assembly (Fig. 6).
5. Open the cassette doors to remove the cassette mechanism assembly.

Note:
The cassette mechanism is grounded through the bottom plate.
Therefore, connect the chassis and the mechanism assembly with some wire when operating.
This mechanism is also designed for pack sensing, then use a cassette tape for checking.

■ Removing the cassette holder
1. Remove the cassette mechanism assembly.
2. Remove the dampers (Fig. 7).
3. Remove the holder spring from the holder bracket (Fig. 7).
4. Remove the cassette holder from the holder bracket.

■ Removing the cassette lids
Open the doors and slide the cassette lids as shown in fig.8.

■ Removing the cassette operation circuit board
1. Remove the cassette mechanism assembly.
2. Remove the cassette holder.
3. Remove the 4 screws Ⓑ and Ⓒ (Fig. 1) and remove the holder brackets.
4. Remove the screw fastening the eject knob holder.
5. Remove the 4 screws fastening the circuit board.

■ Removing the mechanism controller circuit board
1. Remove the front panel assembly.
2. Remove the screw Ⓛ and release the hook Ⓝ (Fig.6).
3. Disconnect some flat wires and connectors.

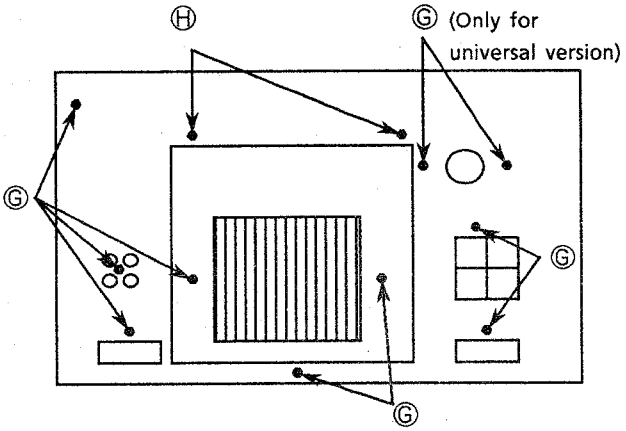


Fig. 5 Rear view

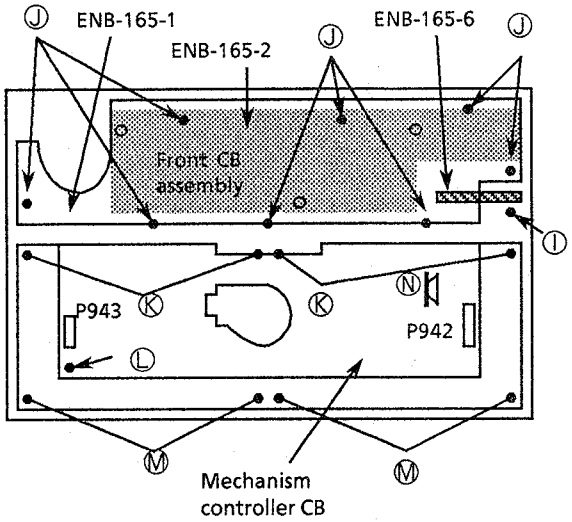


Fig. 6 Bhind the front panel

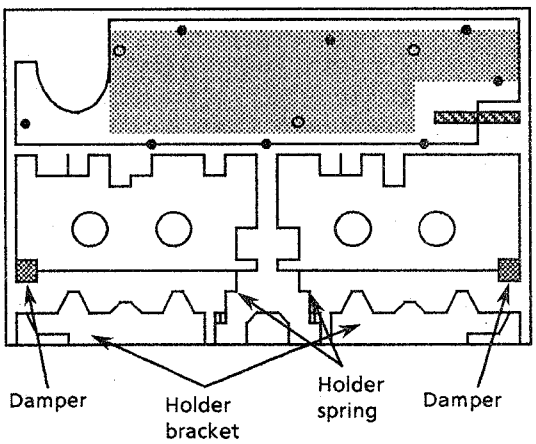


Fig. 7 After removing the mechanism assembly

Fig. 8 Cassette lids

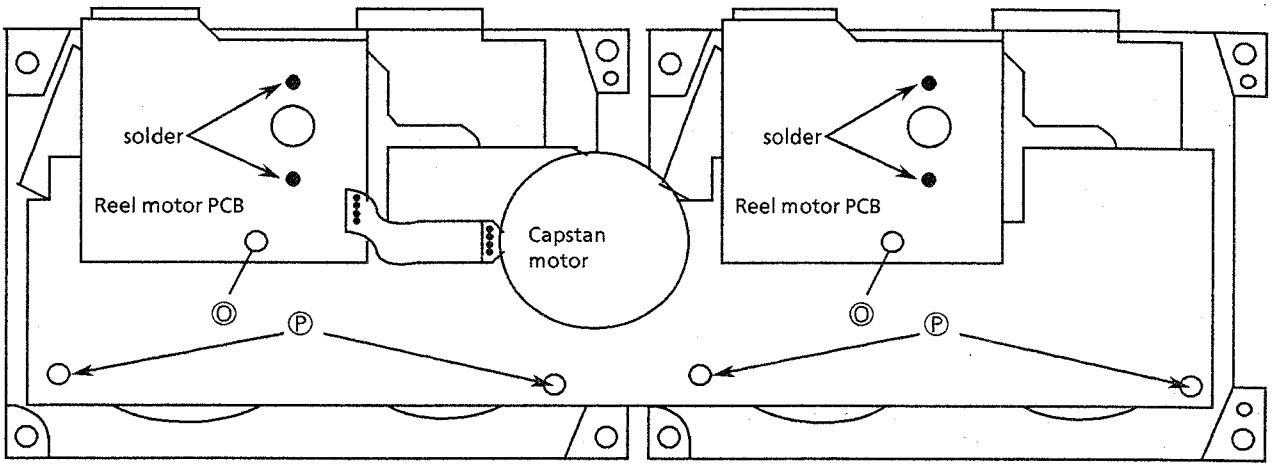


Fig. 9 Rear view of the cassette mechanism

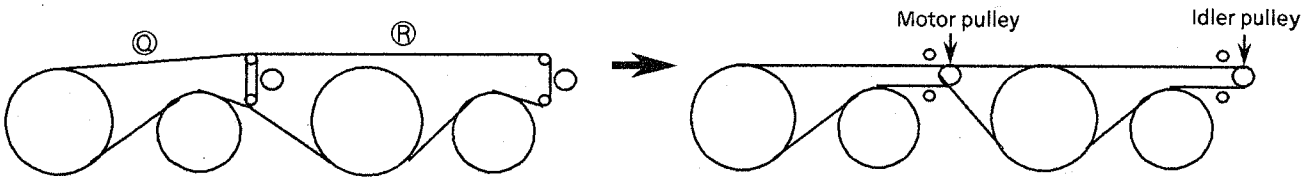


Fig. 10 How to put the belts

■ Removing the reel motor circuit board

1. Remove the mechanism assembly.
2. Remove the mechanism controller circuit board.
3. Remove the screws Ⓞ fixing the reel motor circuit boards (Fig.9).
4. Unsolder the reel motor terminals.
5. Remove the circuit board.

■ Removing the flywheel

1. Remove the mechanism assembly.
2. Remove the mechanism controller circuit board.
3. Remove the reel motor circuit boards.
4. Remove the 4 screws Ⓟ fixing the bracket on which capstan motor is installed (Fig. 9).
5. Remove the bracket and the belts.
5. Release the flywheels.

Installing

Install the flywheels and the belts to the mechanism as shown in fig.10. (When putting the belts, put the belt Ⓠ first.)
At last, install the bracket with the capstan motor to put the belts on the pulleys.

■ Removing the cam switch circuit board

1. Remove the flywheels.
2. Release the hooks fixing the cam switch circuit board to remove the circuit board.

(When installing the cam switch circuit board, assemble the circuit board so that part Ⓢ meets part Ⓣ. Fig. 11)

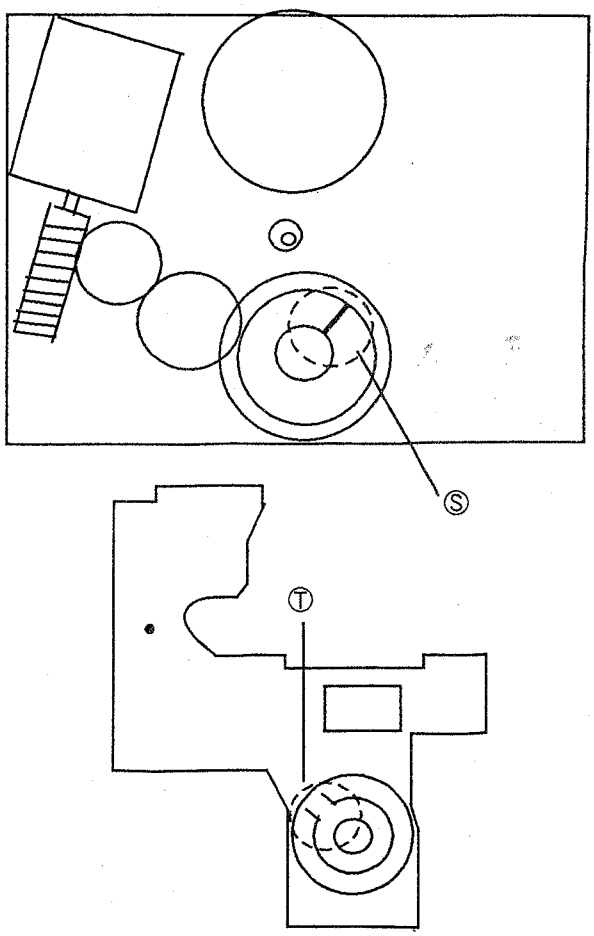


Fig. 11 Gear position

■ Removing the head assembly
1. Remove the cassette mechanism assembly.
2. Unsolder the flexible wire on the relay circuit board, and remove the 2 screws Ⓥ fixing the head assembly (Fig. 13,14).

* Refer to fig.12 when installing.

■ Removing the pinch roller arm assembly
1. Release the return springs from the hooks (Fig. 14).
2. Remove the hooks fixing the pinch roller arm assembly to remove the pinch roller assembly (Fig. 13).

■ Removing the reel motor
1. Remove the mechanism assembly.
2. Remove the reel motor circuit board.
3. Remove the fr arm assembly (Fig. 14).
4. Remove the screws Ⓤ fixing the motor.
5. Release the hooks fixing the motor to remove the motor.

■ Removing the capstan motor
1. Remove the mechanism assembly.
2. Remove the mechanism controller circuit board.
3. Remove the reel motor circuit board.
4. Remove the 4 screws Ⓟ fixing the bracket (Fig. 9).
5. Release the hooks fixing the bracket and remove the capstan motor with the bracket.
6. Remove the 2 screws fixing the motor on the bracket to remove the motor from the bracket.

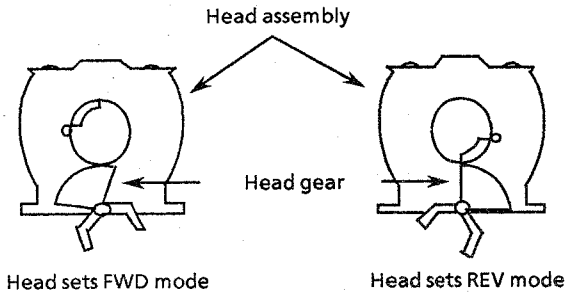


Fig. 12 Bottom view of the head assembly

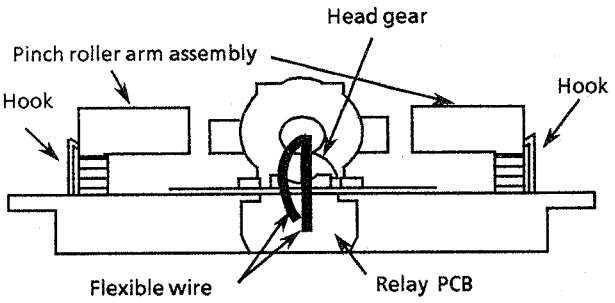


Fig. 13 Bottom view of the cassette mechanism

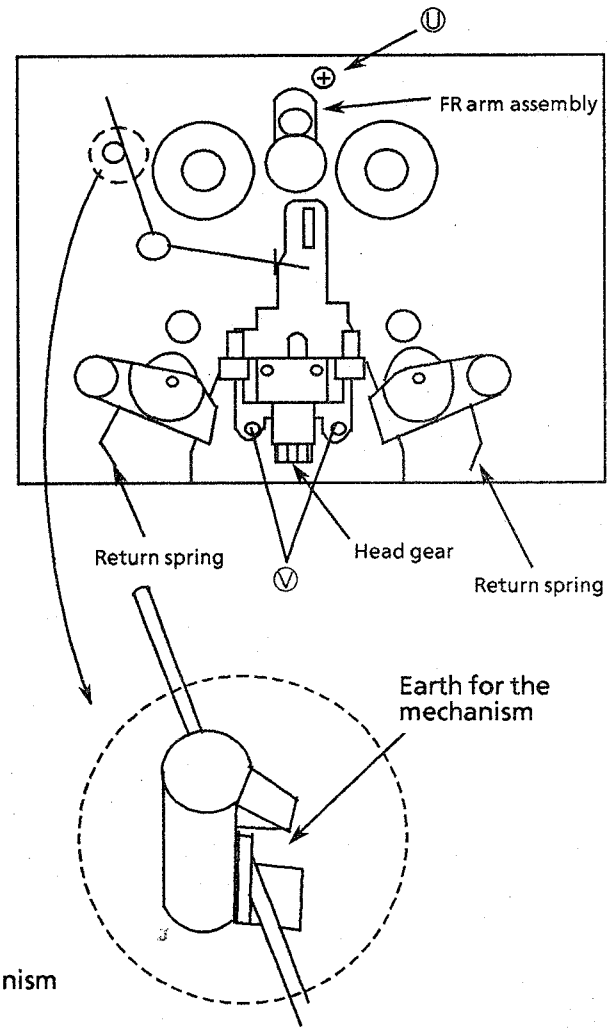


Fig.14 Front view of the cassette mechanism

Adjustment Procedures (Cassette Deck)

1. Measuring instruments for Adjustment

Audio frequency signal generator (0dbs output at the 600 ohm output terminal from 50Hz to 20KHz)
Electronic voltmeter
Frequency counter
Wow & Flutter meter
Distortion Meter with band pass filter
Attenuator (600 ohm impedance)
A resistor with 600Ω

Standard Tape **0dBs = 0.775V**

Tape No.	Frequency	Level (Wow & Fkutter)	Purpose
VTT-703L	10kHz	– 10dBs	Head azimuth , Frequency Response
VTT-712	3000Hz	0dBs 0.025%WRMS	Tape Speed , Wow & Flutter
VTT-724	1kHz	– 4dBs	Standard Level
TMT-6447	—	—	Blunk Skip
TMT-6247 , TMT-6237	—	—	Music Scan
TMT-7046	—	—	Recording standard Normal : UR
AC-712	—	—	Recording standard METAL : MA
AC-513	—	—	Recording standard CrO_2 : SA
TW-2111, TW-2121	—	—	Forward / reverse play torque measuring
TW-2231	—	—	Feed forward / rewind torque measuring
C-120 Tape	—	—	Comfirming the tape running

2. Adjustment and repairing the mechanism

Item	Adjustment method	Standard value	Remarks
Head azimuth	Deck A 1. Connect an electronic voltmeter to the DOLBY TP(figure 3) to playback VTT-703L. 2. Adjust screw Ⓐ so that the indication of the voltmeter becomes maximum when PLAY (▶) is pressed. 3. Adjust screw Ⓑ so that the indication of the voltmeter becomes maximum when PLAY (◀) is pressed. Deck B 4. Adjust screw Ⓒ so that the indication of the voltmeter becomes maximum when PLAY (▶) is pressed. 5. Adjust screw Ⓓ so that the indication of the voltmeter becomes maximum when PLAY (◀) is pressed. 6. After making the adjustment,apply screw lock to prevent screws Ⓐ , Ⓑ , Ⓒ and Ⓓ coming loose .	Maximum	1. **Refer to figure 1.** 2. When the specified characteristic cannot be obtained because of head wear, excessive magnetization, etc., replace the head assembly and adjust the head azimuth. Also, perform the electric adjustment. 3. When there is the difference of more than 3 ~ 4 dB between left and right output levels, replace the head assembly to avoid complaints.
Playback torque	1. Measure the torque in the playback mode by the torqu meter.	26 ~ 62 g-cm	When the standard torque cannot be obtained, replace the FR arm assembly or motor.
Fast forward torque	1. Measure the torque in the fast forward mode by the torqu meter.	80 ~ 200 g-cm	When the standard torque cannot be obtained,replace the FR arm assembly or motor.
Rewind torque	1. Measure the torque in the rewind mode by the torqu meter.	80~ 200 g-cm	When the standard torque cannot be obtained, replace the FR arm assembly or motor.
Wow & flutter	1. Connect the wow & flutter meter to the DOLBY TP(figure 3) and play back VTT-712. 2. Its reading should be within 0.2% (WTD).	—	As a complaint may occur if the wow & flutter fluctuates by 0.1% even though it is allowed in the standard, repairing is required.

Deck A **Figure 1** Deck B

3. Electrical Adjustments (Make the following adjustments after adjusting the head azimuth.)

In principle, the adjustments should be made in the following sequence.

Set the NR switch to OFF and the BEAT CUT switch to "1".

Adjustments marked with an asterisk (*) should always be made after the head is replaced **0dBs = 0.775V.**

	Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
1	Tape Speed	1. Connect a frequency counter to the DOLBY TP(figure 3) and play back VTT-712. 2. Normal speed Adjustment 1) Mechanism B Play back deck B to adjust the semi-fixed resistor VR481 on ENB-165-3. 2) Mechanism A Play back deck A to confirm that the difference between deck A and deck B is within ±51Hz. 3. High-speed adjustment 1) Mechanism B Play back deck B and adjust the semi-fixed resistor VR482 on ENB-165-3.	VR481 VR482	3,000 Hz ±10Hz 6,000Hz ±20Hz	1) Adjust the normal speed first, and perform the high speed adjustment.
*2	Standard level (Playback Level)	1. Connect an electronic voltmeter to the DOLBY TP (figure 3). Play back VTT-724 (1 kHz: −4dBs) to adjust the semi-fixed resistors.	**Deck A** L: VR451 R: VR452 **Deck B** L: VR453 R: VR454	−5.5dBs (411mV) ±1dB	1) The playback level varies when the head is replaced so should be adjusted. Use an electronic voltmeter with an impedance of 100 kΩ or more.
*3	Playback Frequency Response	1. Connect an electronic voltmeter to the DOLBY TP (figure 3). 2. Play VTT-703L (10kHz: −10dBs) and adjust semi-fixed resistors to obtain the standard values.	**Deck A** L: VR455 R: VR456 **Deck B** L: VR457 R: VR458	−11.5dBs (206mV) ±3dB	—
*4	Recording Bias Frequency	1. Connect a frequency counter to the BIAS TP(figure 3), and perform a recording to adjust bias frequency.	L331	100 kHz ±5 kHz	Set the BEAT CUT SWITCH to "1".
*5	Record / Play Frequency Response (Bias current)	1. Supply 1kHz and 12.5kHz with 30mV signals to VIDEO/AUX terminals respectively. to record them. 2. Connect an electronic voltmeter to the DOLBY TP (figure 3) to confirm the recorded values. 3. If the values are not satisfied, adjust the semi-fixed resistors and record the signals again to confirm the values.	L: VR331 R: VR332	0±3 dB for 12.5 kHz with 1 kHz as the standard.	**Refer to figure 2 below.** 1) The recording and playback frequency response of a cassette deck are adjusted by adjusting the bias current. 2) Perform the adjustment with normal tape and confirm that the values are within the range for metal tape.

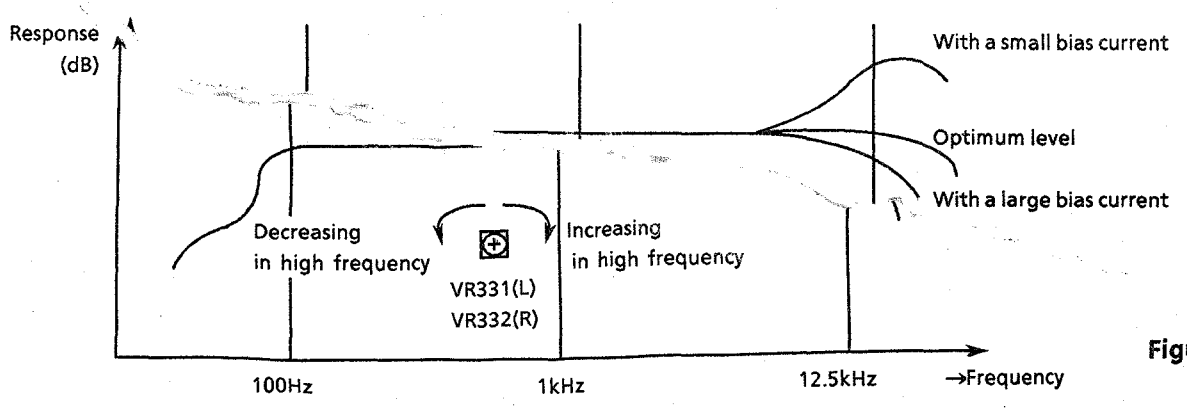
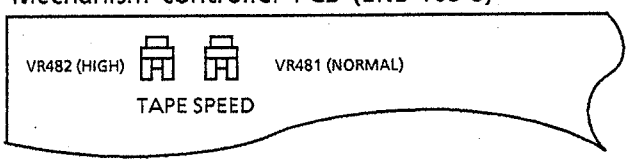


Figure 2

	Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
* 6	Record / Playback Sensitivity	1. Input a 1 kHz (– 8.2dBs: 300mV) signal to VIDEO/AUX terminals and record it on the left and right channels . 2. Connect an electronic voltmeter to the DOLBY TP (figure 3) to confirm the recorded values . 3. If the values are not satisfied , adjust the semi-fixed resistors and record the signals again to confirm the values.	L : VR311 R : VR312	– 5.5dBs (411mV)	Adjust with normal tape and make sure that the left / right level difference is 1.0dB or less
7	Erase ratio check	1. Record a music source using CrO_2 tape. 2. Rewind and erase the recorded section. 3. Comfirm nothing can be heard.	–	–	–
8	Auto-stop check	Make sure to operate AUTO STOP at the end of tape running and not to operate on the way of the playing.	–	–	–
9	Music Scan	1. Make sure not to work the music scanning operation at the start of tape wind using TMT-6237 . 2. Make sure to work the music scanning operation at the end of tape wind using TMT-6247 .	–	–	–

Mechanism controller PCB (ENB-165-3)



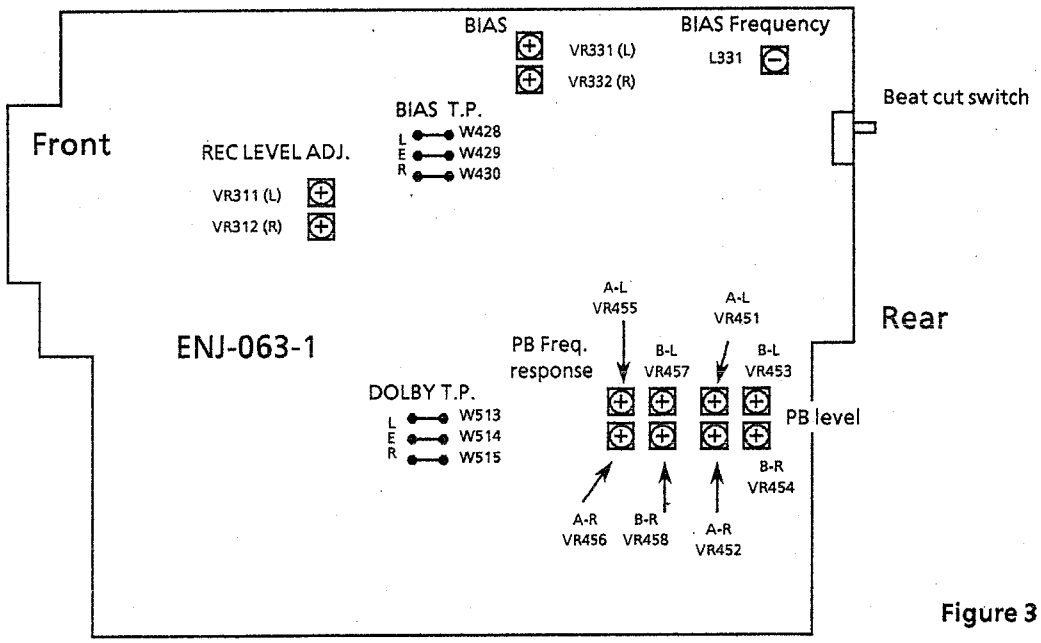
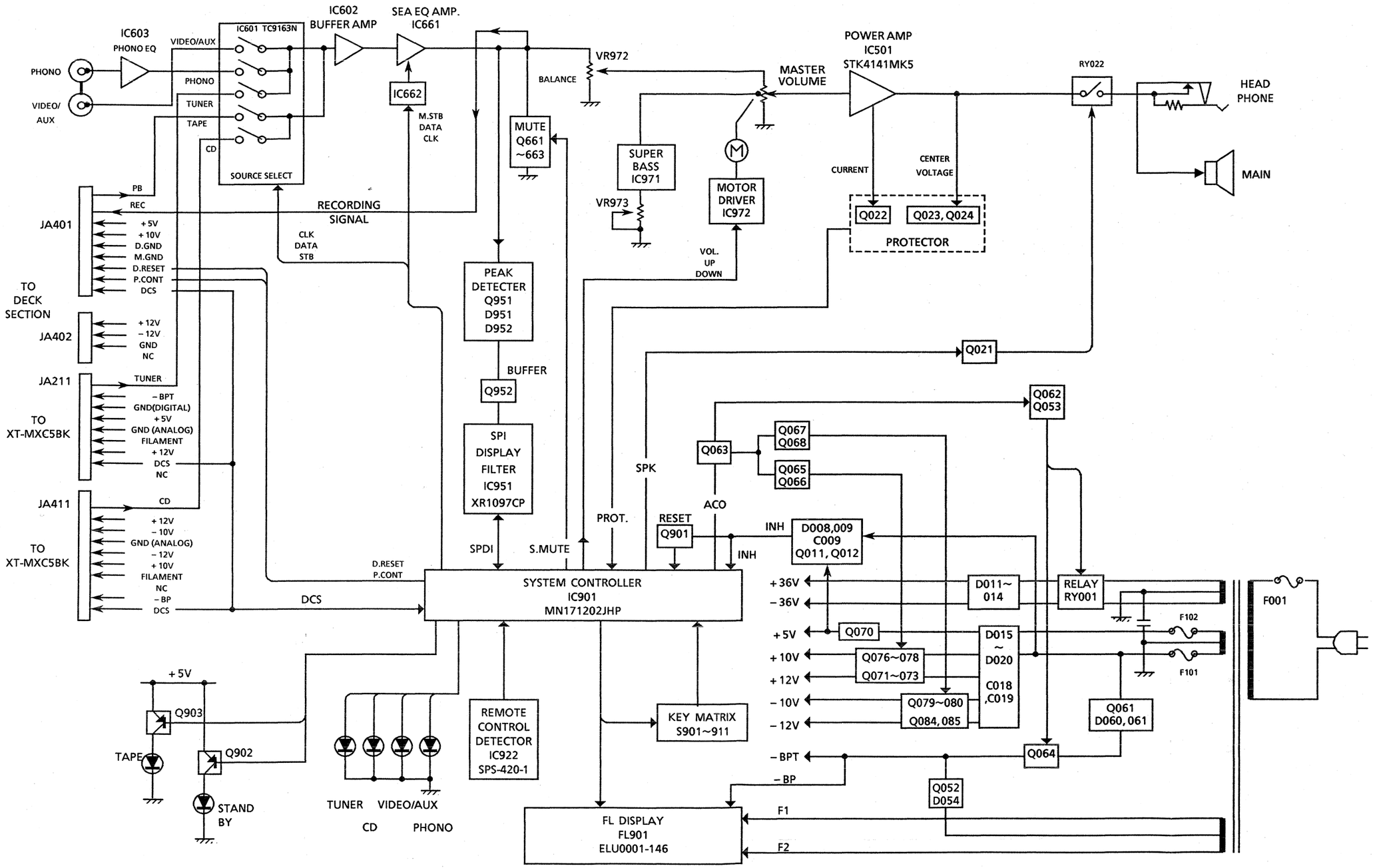


Figure 3

Block Diagram



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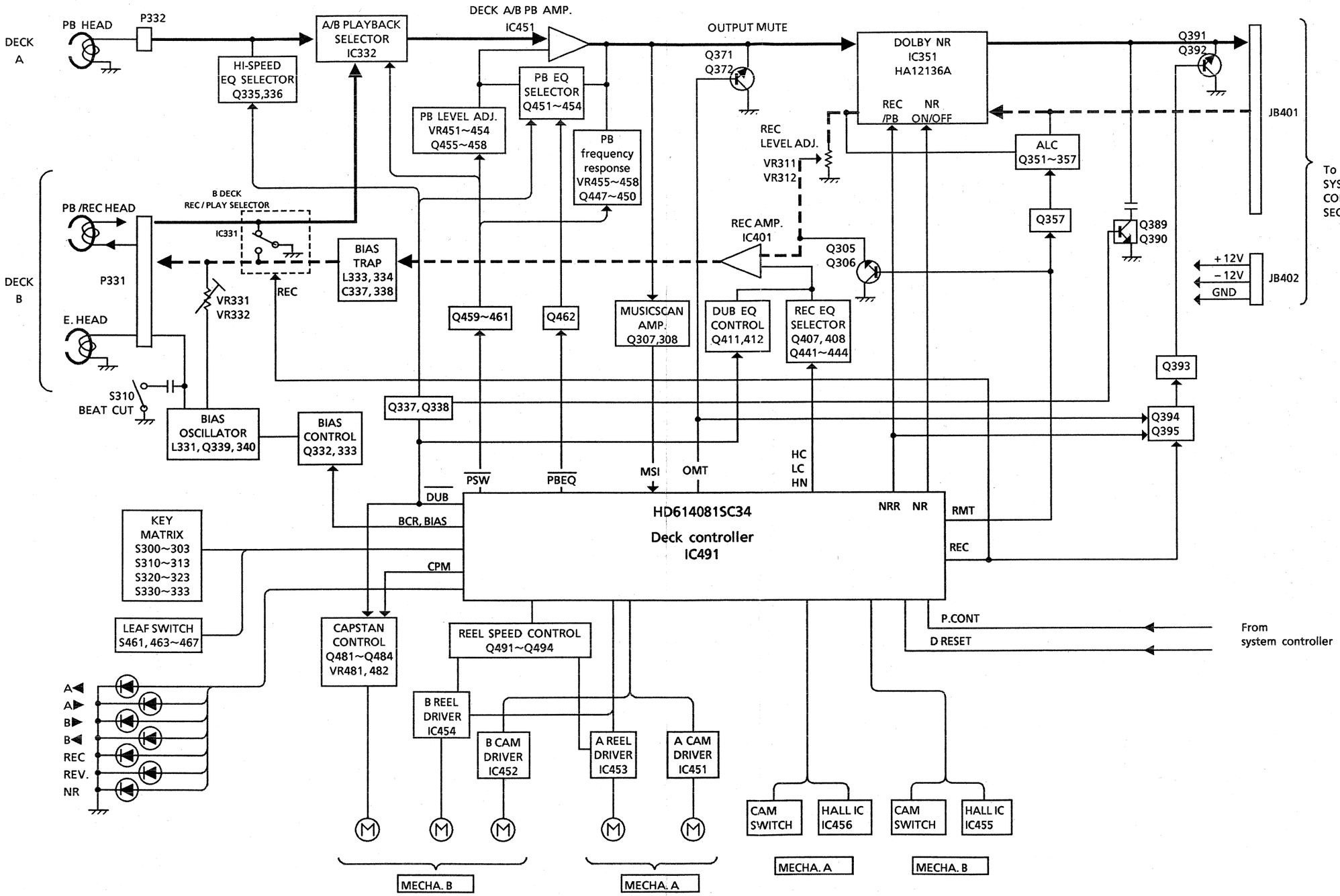
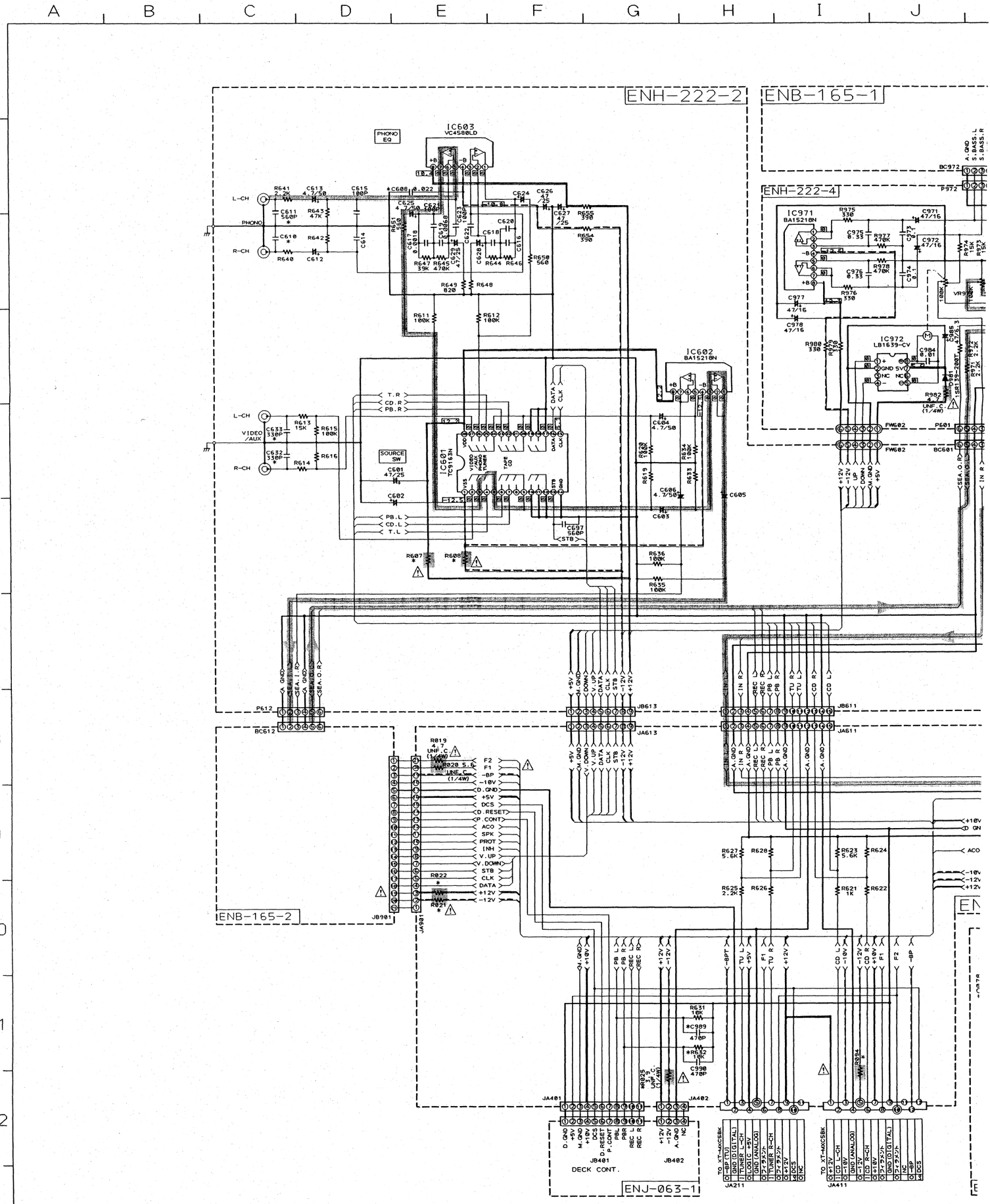


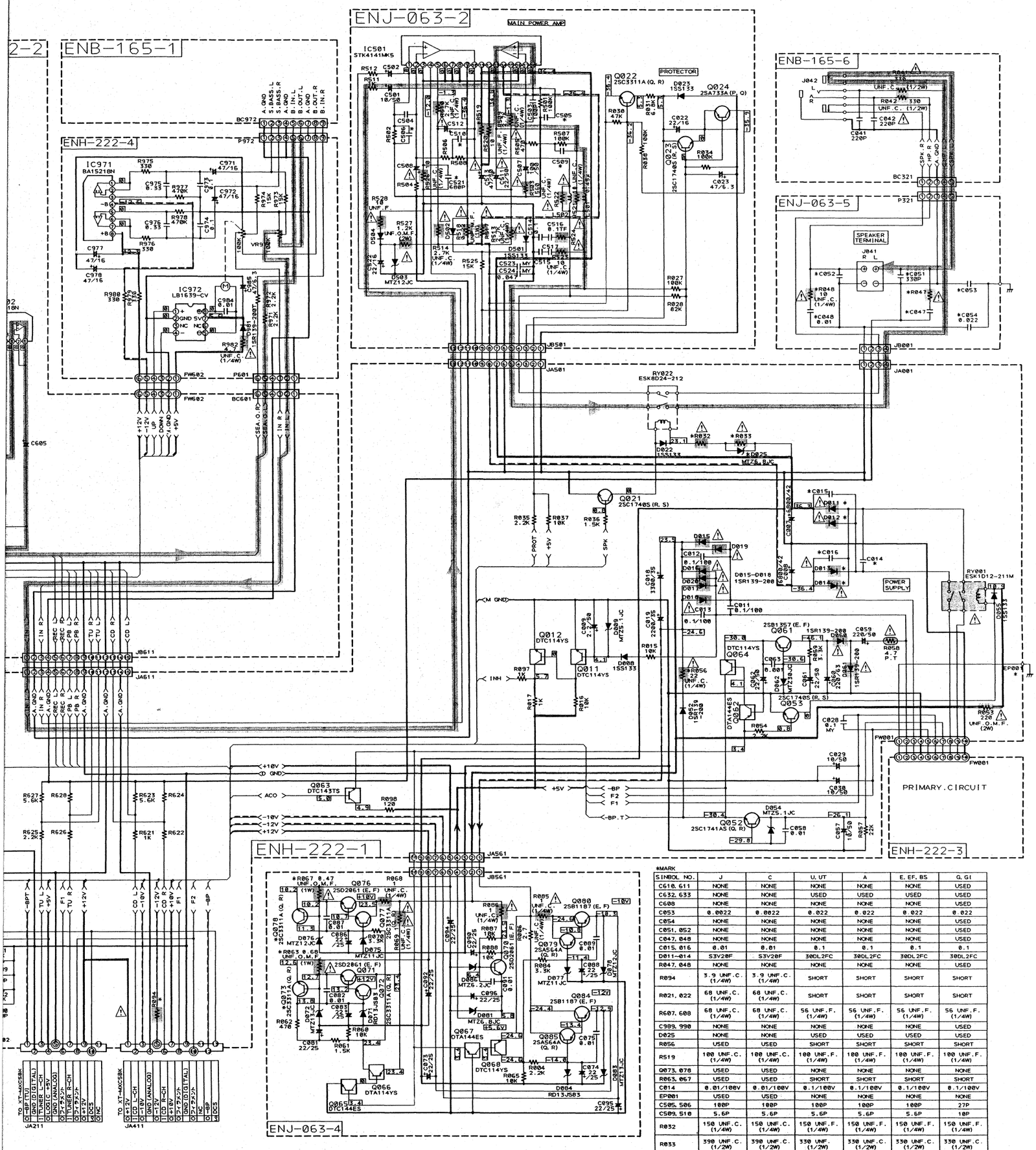
(No. 20389) (No. 20389)

Schematic Diagrams

(1) Input Selector, Power Amplifier & Power Supply Section



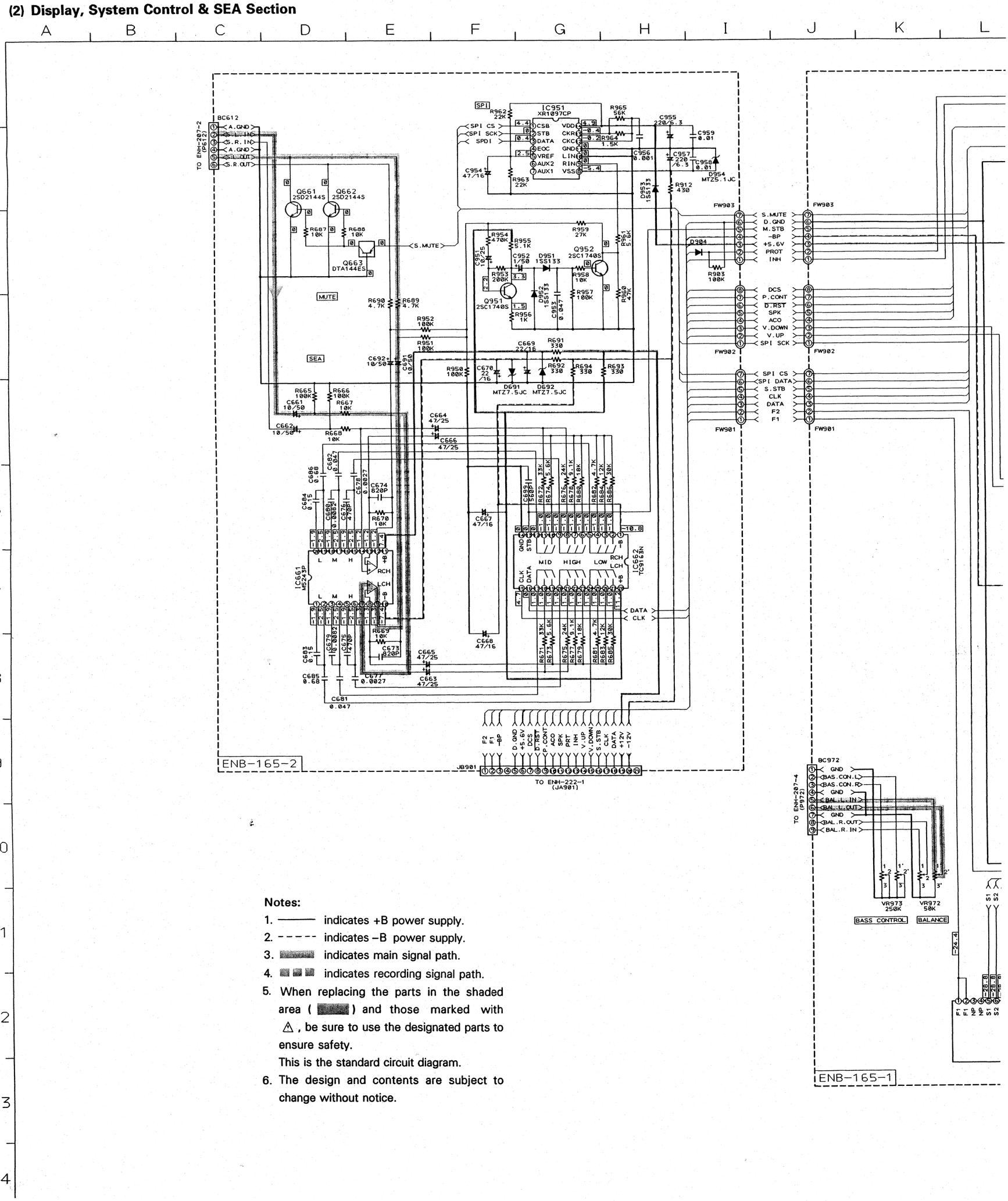
H I J K L M N O P Q R S



*MARK SINBOL NO.	J	C	U, UT	A	E, EF, BS	G, GI
C610, 611	NONE	NONE	NONE	NONE	NONE	USED
C632, 633	NONE	NONE	USED	USED	USED	USED
C608	NONE	NONE	NONE	NONE	NONE	USED
C053	0.0022	0.0022	0.022	0.022	0.022	0.022
C054	NONE	NONE	NONE	NONE	NONE	USED
C051, 052	NONE	NONE	NONE	NONE	NONE	USED
C047, 048	NONE	NONE	NONE	NONE	NONE	USED
C015, 016	0.01	0.01	0.1	0.1	0.1	0.1
D011~014	S3V20F	S3V20F	30DL2FC	30DL2FC	30DL2FC	30DL2FC
R047, 048	NONE	NONE	NONE	NONE	NONE	USED
R034	3.9 UNF.C. (1/4W)	3.9 UNF.C. (1/4W)	SHORT	SHORT	SHORT	SHORT
R021, 022	68 UNF.C. (1/4W)	68 UNF.C. (1/4W)	SHORT	SHORT	SHORT	SHORT
R607, 608	68 UNF.C. (1/4W)	68 UNF.C. (1/4W)	56 UNF.F. (1/4W)	56 UNF.F. (1/4W)	56 UNF.F. (1/4W)	56 UNF.F. (1/4W)
C989, 990	NONE	NONE	NONE	NONE	NONE	USED
D025	NONE	NONE	USED	USED	USED	USED
R056	USED	USED	SHORT	SHORT	SHORT	SHORT
R519	100 UNF.C. (1/4W)	100 UNF.C. (1/4W)	100 UNF.F. (1/4W)	100 UNF.F. (1/4W)	100 UNF.F. (1/4W)	100 UNF.F. (1/4W)
Q073, 078	USED	USED	NONE	NONE	NONE	NONE
R063, 067	USED	USED	SHORT	SHORT	SHORT	SHORT
C014	0.01/100V	0.01/100V	0.1/100V	0.1/100V	0.1/100V	0.1/100V
EP001	USED	USED	NONE	NONE	NONE	NONE
C505, 506	100P	100P	100P	100P	100P	27P
C509, 510	5.6P	5.6P	5.6P	5.6P	5.6P	10P
R032	150 UNF.C. (1/4W)	150 UNF.C. (1/4W)	150 UNF.F. (1/4W)	150 UNF.F. (1/4W)	150 UNF.F. (1/4W)	150 UNF.F. (1/4W)
R033	390 UNF.C. (1/2W)	390 UNF.C. (1/2W)	330 UNF. (1/2W)	330 UNF.C. (1/2W)	330 UNF.C. (1/2W)	330 UNF.C. (1/2W)
R025	USED	USED	SHORT	SHORT	SHORT	SHORT

(No. 20389)

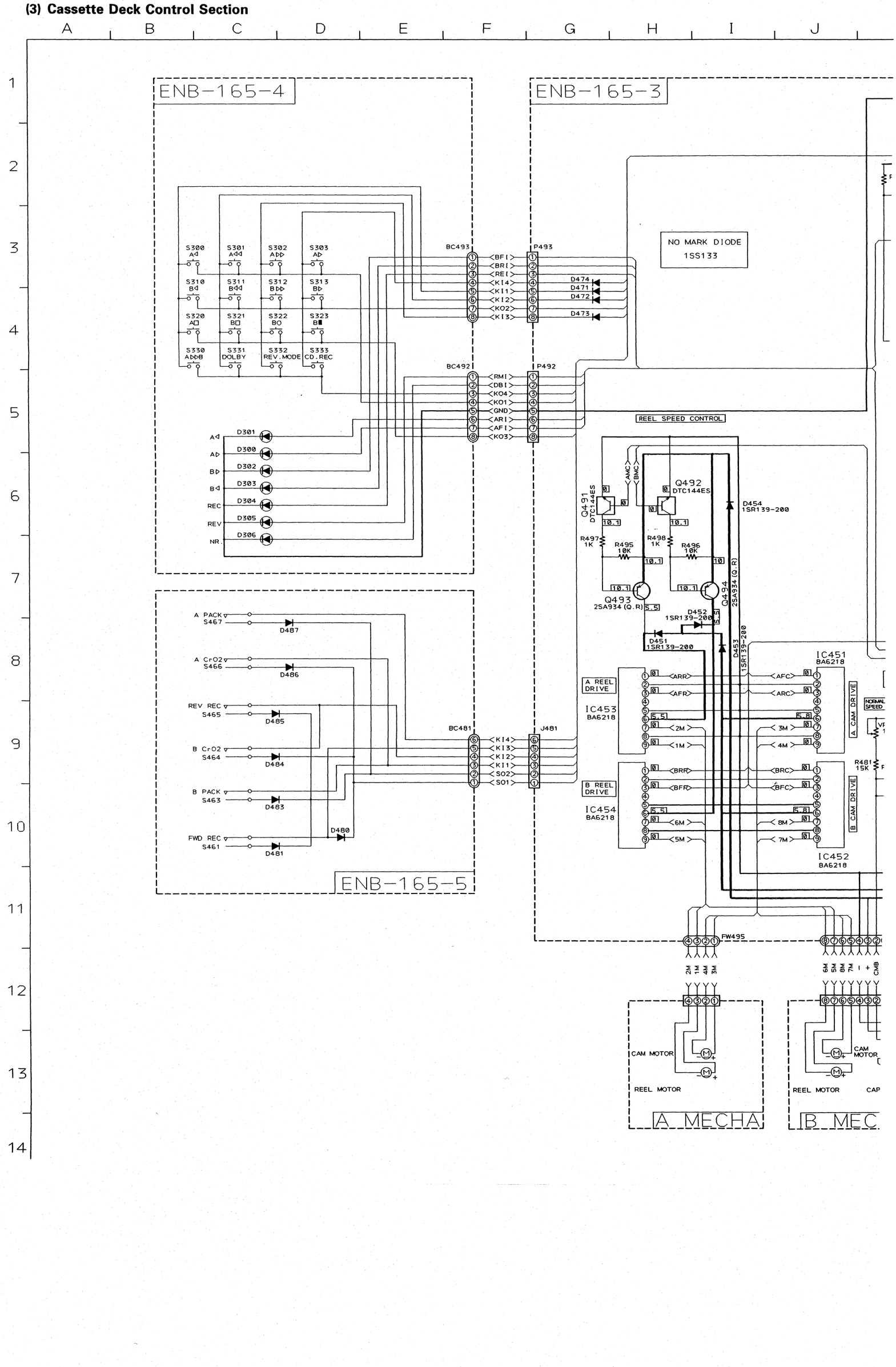
(2) Display, System Control & SEA Section



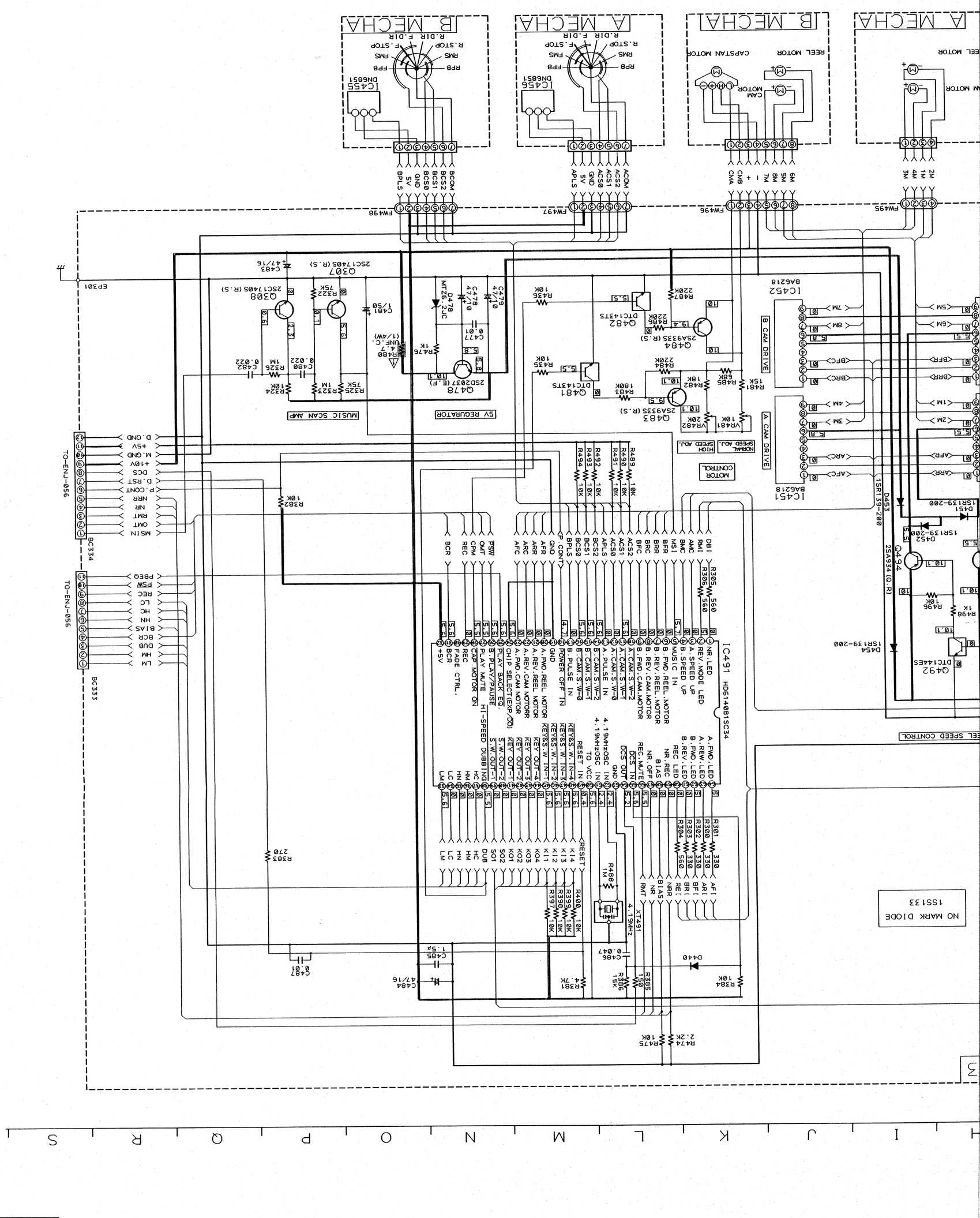
Notes:

1. ——— indicates +B power supply.
2. - - - - - indicates –B power supply.
3. ▬▬ indicates main signal path.
4. ▪▪▪ indicates recording signal path.
5. When replacing the parts in the shaded area (▬▬) and those marked with ⚠, be sure to use the designated parts to ensure safety.
   This is the standard circuit diagram.
6. The design and contents are subject to change without notice.

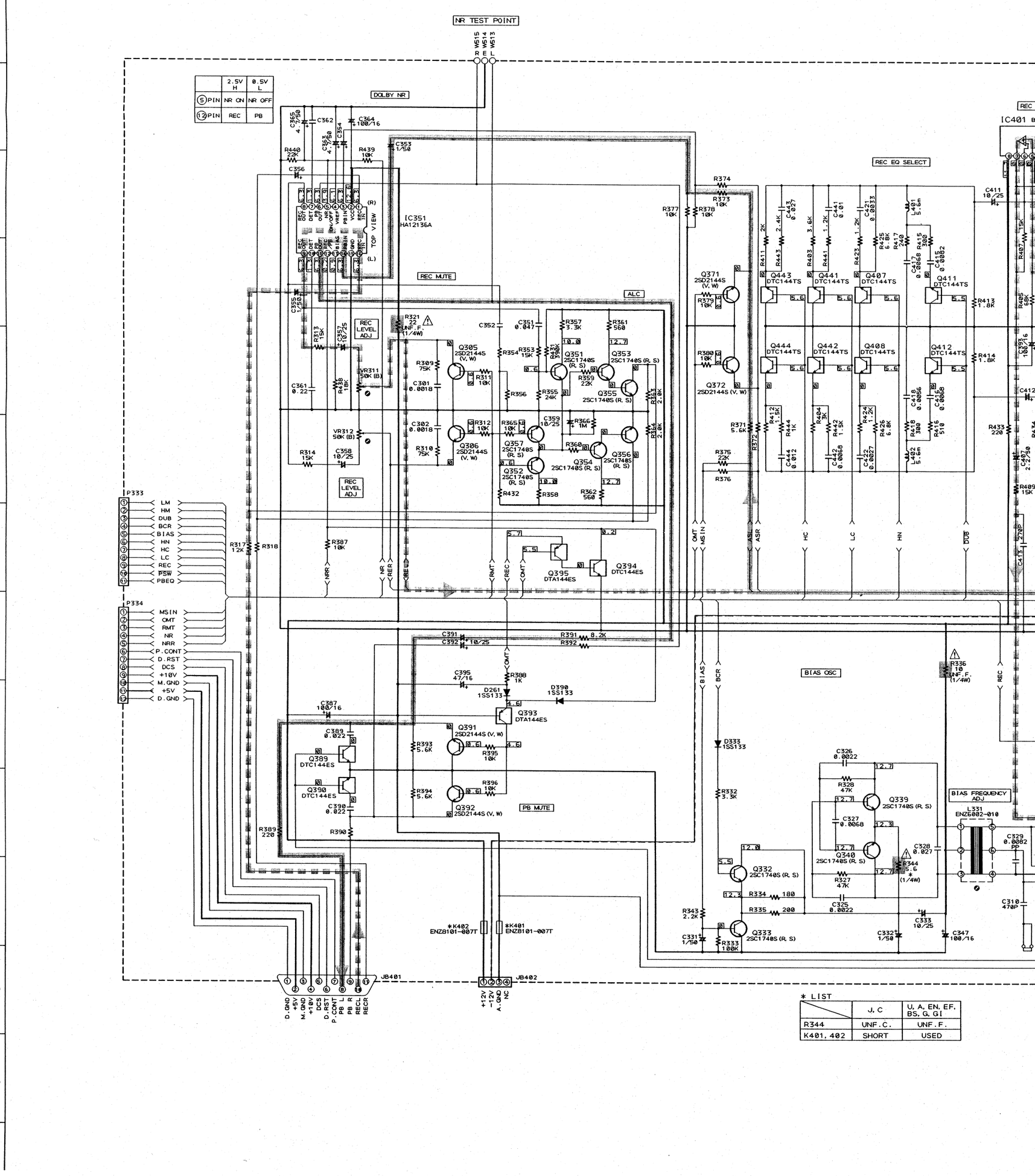
(3) Cassette Deck Control Section



(No. 20389)


A MECHA
B MECHA
REEL MOTOR
CAPSTAN MOTOR
CAM MOTOR
IC491 HDE1408ISC34
IC452 BA6218
IC451 BA6218
Q483 2SA933S (R.S)
Q484 2SA933S (R.S)
Q482 DTC143TS
Q481 DTC143TS
Q478 2SD2037 (E.F)
Q307 2SC1740S (R.S)
Q308 2SC1740S (R.S)
Q494 2SA934 (Q.R)
Q492 DTC144ES
D453 1SR139-200
D452 1SR139-200
D451 1SR139-200
D454 1SR139-200
D440 1SS133
NO MARK DIODE
XT491 4.19MHz
MOTOR CONTROL
NORMAL SPEED ADJ.
HIGH SPEED ADJ.
A CAM DRIVE
B CAM DRIVE
5V REGURATOR
MUSIC SCAN AMP
REEL SPEED CONTROL
HI-SPEED DUBBING
TO-ENJ-056
BC334
BC333
EP301
FW435
FW436
FW437
FW438
C455 DN6851
R382 10K
R383 270
R384 10K
R385 15K
R386 15K
R388 1M
R389 10K
R390 10K
R391 10K
R392 10K
R393 10K
R394 10K
R395 10K
R396 10K
R397 10K
R400 10K
R474 2.2K
R475 10K
R476 1K
R480 4.7 UNF.C. (1/4W)
R481 15K
R482 18K
R483 180K
R484 220K
R485 68K
R486 220K
R487 220K
R435 10K
R436 10K
R438 10K
R439 1K
R305 560
R304 560
R303 330
R302 330
R301 330
R300 330
C477 0.01
C478 47/10
C479 47/10
C480 0.022
C481 1/50
C482 0.022
C483 47/16
C484 47/16
C485 1.5P
C486 0.047
C487 0.01
R225 75K
R322 75K
R323 1M
R324 10K
R326 1M
R381 4.7K
R305 560
R300 330
R301 330
R302 330
R303 330
R304 560
R435 10K
R436 10K
R438 10K
R439 1K
R474 2.2K
R475 10K
R476 1K
R480 4.7 UNF.C. (1/4W)
R481 15K
R482 18K
R483 180K
R484 220K
R485 68K
R486 220K
R487 220K
R488 1M
R489 10K
R490 10K
R491 10K
R492 10K
R493 10K
R494 10K
R395 10K
R396 10K
R397 10K
R400 10K
R381 4.7K
R382 10K
R383 270
R384 10K
R385 15K
R386 15K
C477 0.01
C478 47/10
C479 47/10
C480 0.022
C481 1/50
C482 0.022
C483 47/16
C484 47/16
C485 1.5P
C486 0.047
C487 0.01
R225 75K
R322 75K
R323 1M
R324 10K
R326 1M
D478 MTZ6.2JC
FADE CTRL.
REC
BCR
+5V
PLAY MUTE
B.PLAY/PAUSE
A.FWD.CAM MOTOR
A.REV.CAM MOTOR
A.REV.REEL MOTOR
A.FWD.REEL MOTOR
B.PULSE IN
POWER OFF IN
A.PULSE IN
B.CAM.S.W-0
B.CAM.S.W-1
B.CAM.S.W-2
A.CAM.S.W-0
A.CAM.S.W-1
A.CAM.S.W-2
B.FWD.CAM.MOTOR
B.REV.CAM.MOTOR
B.REV.REEL.MOTOR
B.FWD.REEL.MOTOR
MUSIC IN
B.SPEED UP
A.SPEED UP
REV.MODE LED
NR.LED
A.FWD.LED
A.REW.LED
B.FWD.LED
B.REV.LED
REC LED
NR.REC
NR.OFF
BIAS
REC.MUTE
DCS IN
DCS OUT
4.19MHzOSC IN
4.19MHzOSC OUT
RESET IN
KEY&S.W.IN-4
KEY&S.W.IN-3
KEY&S.W.IN-2
KEY&S.W.IN-1
KEY OUT-4
KEY OUT-3
KEY OUT-2
KEY OUT-1
S.W.OUT-2
S.W.OUT-1
RESET
KI4
KI3
KI2
KI1
KO4
KO3
KO2
KO1
SO2
SO1
DUB
HC
HM
HN
LC
LM
AFC
ARC
ARR
AFR
GND
P.CONT
BPLS
BCS2
BCS1
BCS0
ACS2
ACS1
ACS0
APLS
BRC
BFC
BRR
BFR
MSI
BMC
AMC
RMI
DBI
PSW
OMT
CPM
REC
BCR
MSIN
NRR
NR
RMT
OMT
P.CONT
D.RST
DCS
+10V
M.GND
+5V
D.GND
PBEQ
PSW
REC
LG
HG
HN
BIAS
BCR
DUB
HM
LM
AFI
ARI
BFI
BRI
REI
NRR
BIAS
NR
RMT
7M
8M
5M
6M
CMA
CMB
+
-
1M
2M
3M
4M
ACOM
ACS2
ACS1
ACS0
APLS
5V
GND
BCOM
BCS2
BCS1
BCS0
BPLS
5V
GND
FPB
FMS
RMS
R.STOP
F.STOP
R.DIR
F.DIR

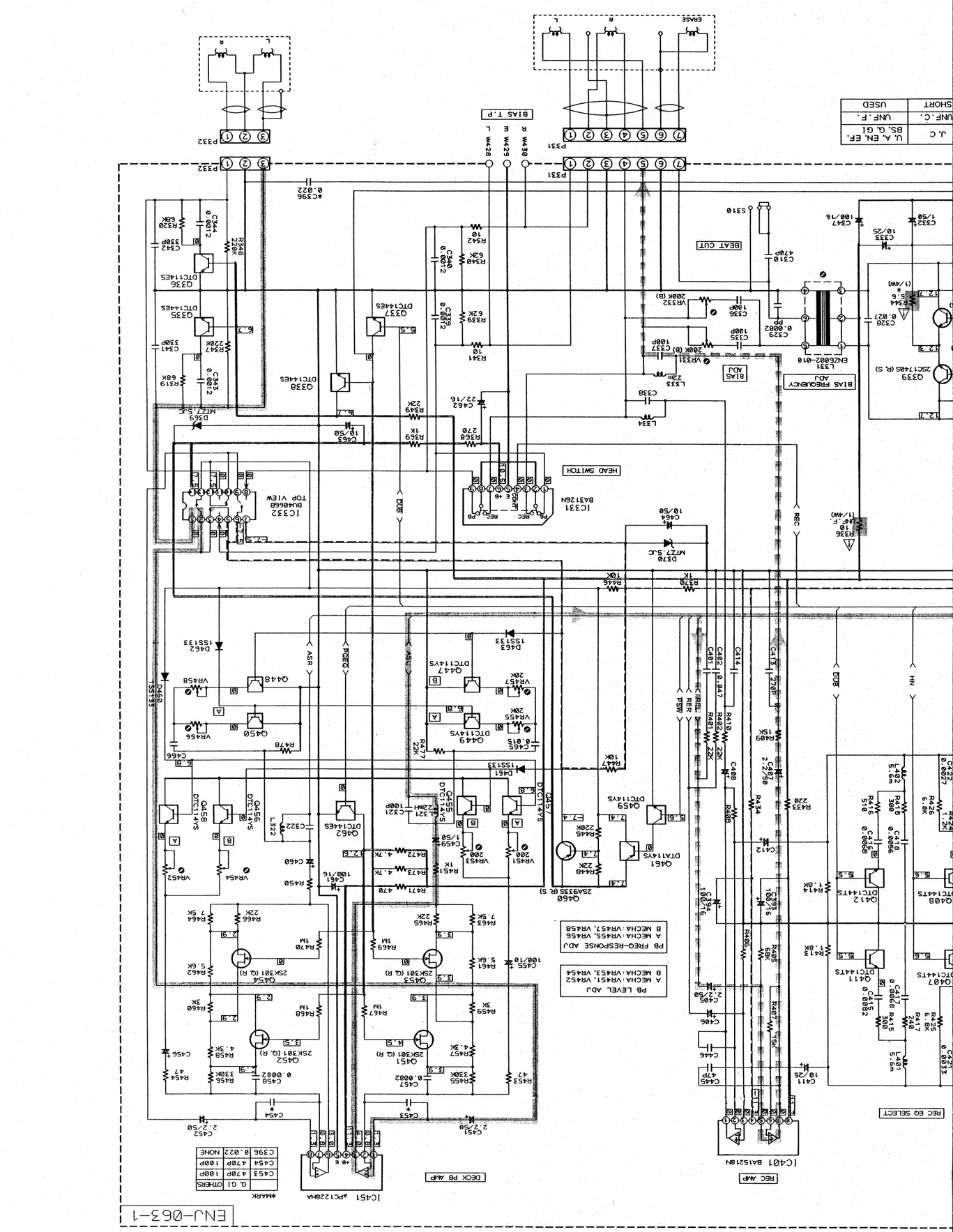
(4) Cassette Deck Section



	2.5V H	0.5V L
⑤PIN	NR ON	NR OFF
⑫PIN	REC	PB

* LIST

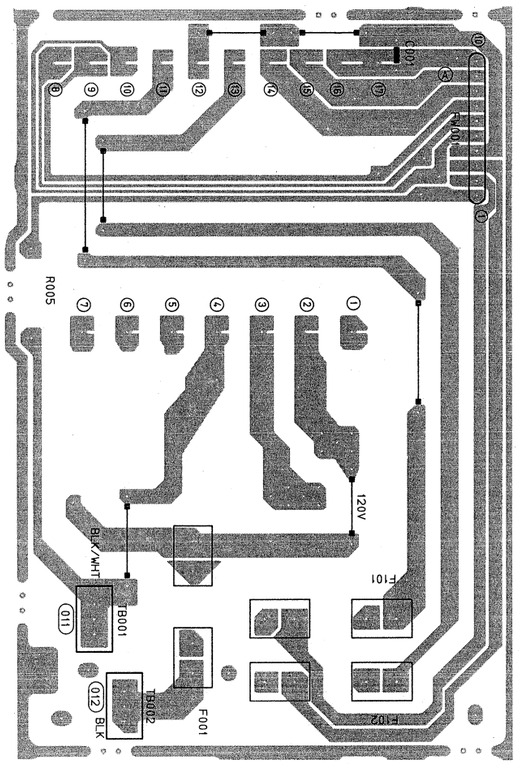
	J, C	U, A, EN, EF, BS, G, GI
R344	UNF.C.	UNF.F.
K401, 402	SHORT	USED


J, C
U, A, EN, EF, BS, G, GI
UNF. C.
UNF. F.
SHORT
USED
BIAS T.P
P331
P332
EBASE
BEAT CUT
BIAS FREQUENCY ADJ
BIAS ADJ
HEAD SWITCH
IC331 BA312EN
IC332 BU4066B TOP VIEW
PB FREQ-RESPONSE ADJ
A MECHA: VR451, VR452
B MECHA: VR457, VR458
PB LEVEL ADJ
A MECHA: VR451, VR452
B MECHA: VR453, VR454
IC451 μPC1228HA
IC401 BA15218N
DECK PB AMP
REC AMP
REC EQ SELECT
ASR
PBEQ
REC
DUB
HN
REL
REF
PSN
*MARK
ENU-063-1

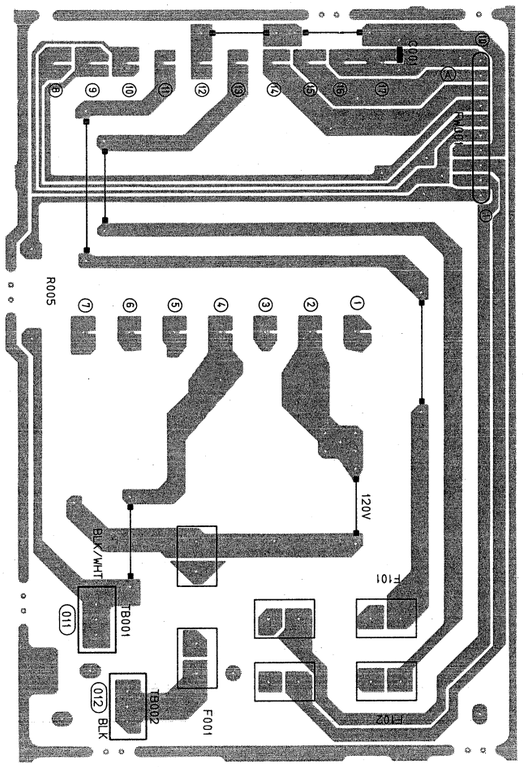
(No. 20389)

(2) Input Selector & Power Supply PCB (ENH-222) Power Transformer Section

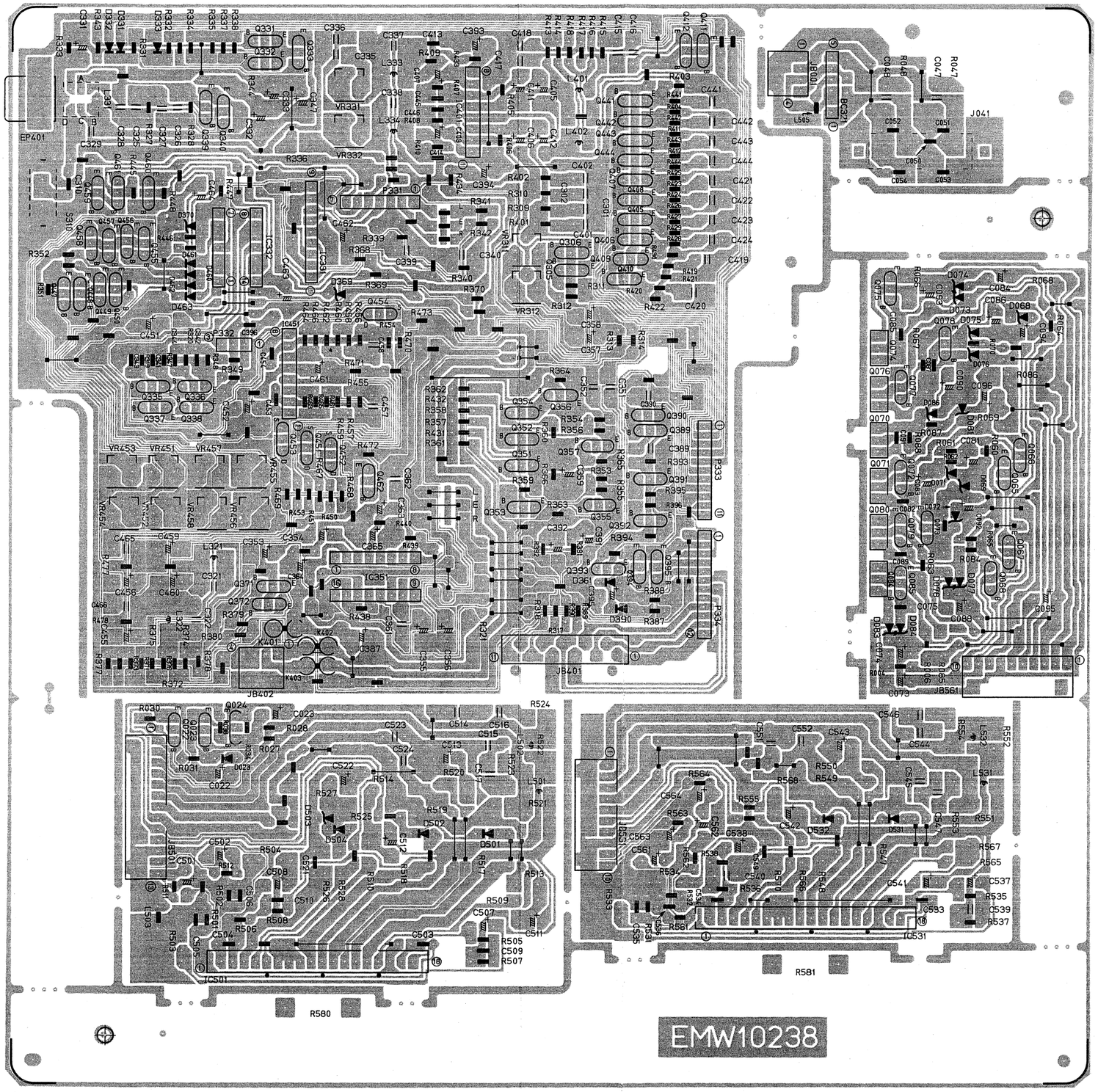
Europe, Australia



America, Canada

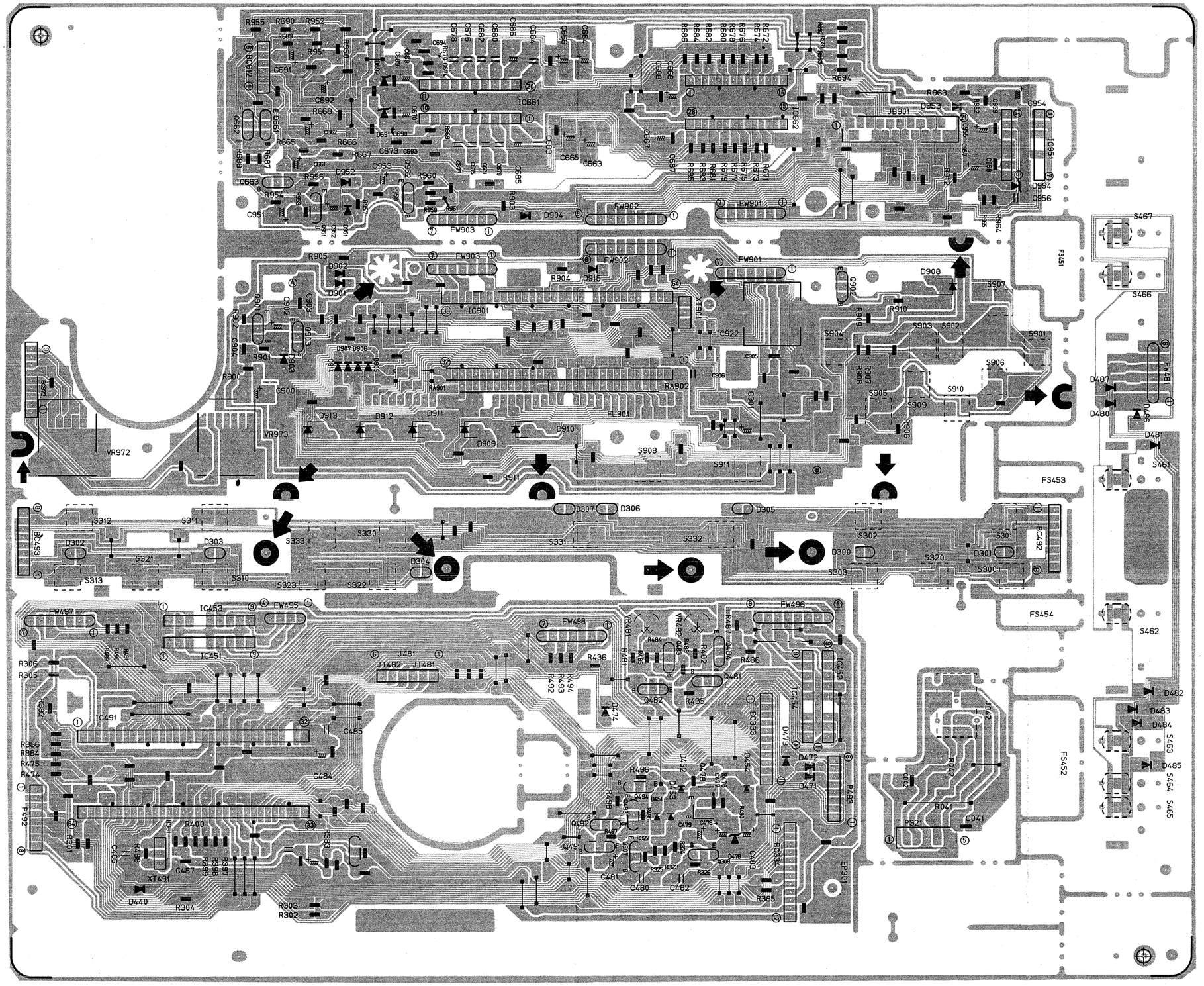


(3) Deck, Regulator & Amplifier PCB (ENJ-063)



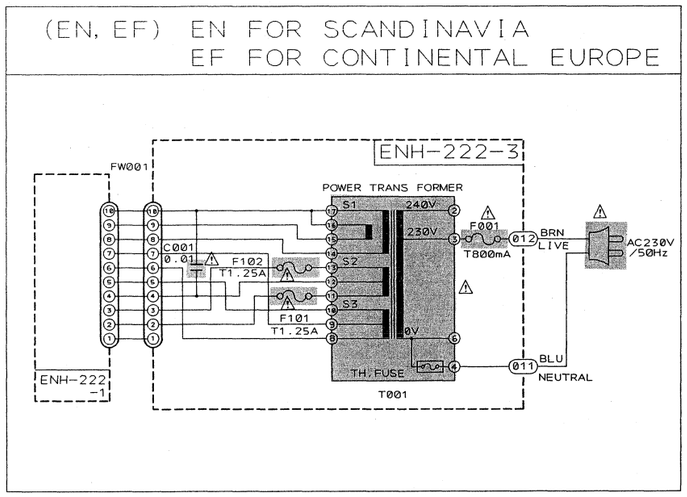
(No. 20389) (No. 20389)

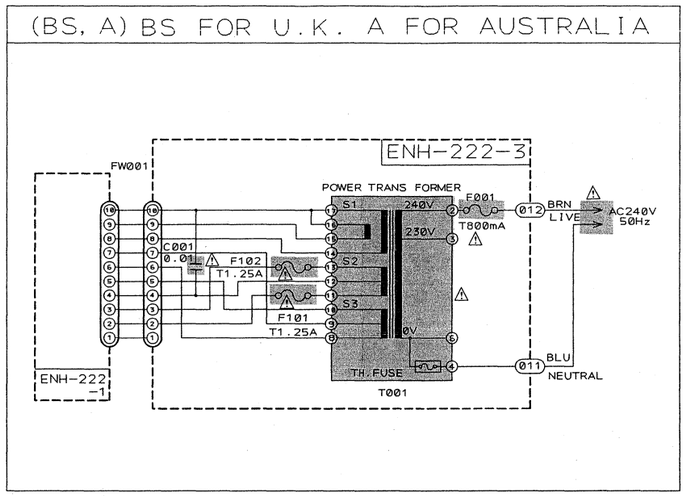
(4) System & Deck Controller PCB (ENB-165)

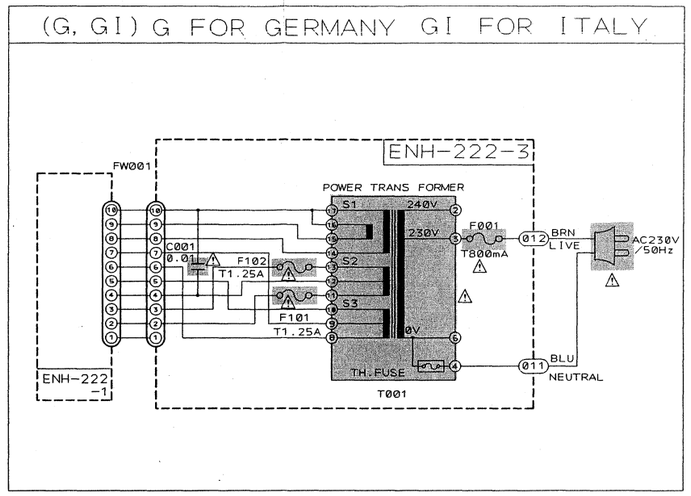


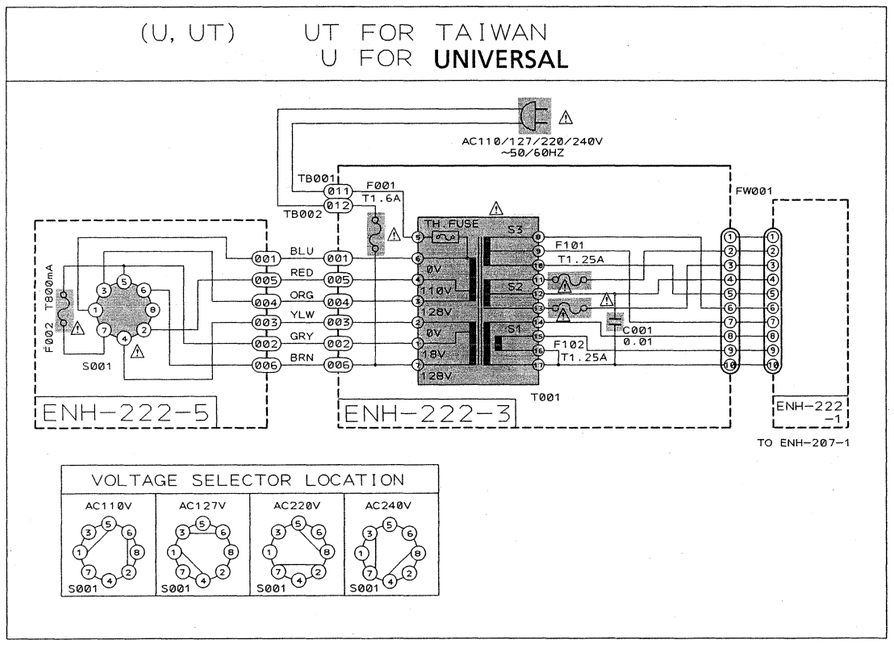
(No. 20389)

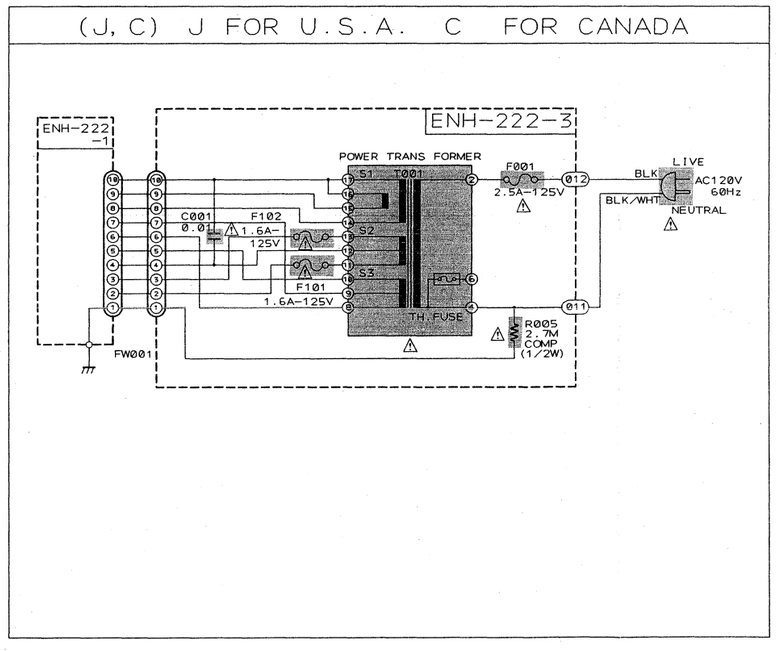
(5) Power Primary Section





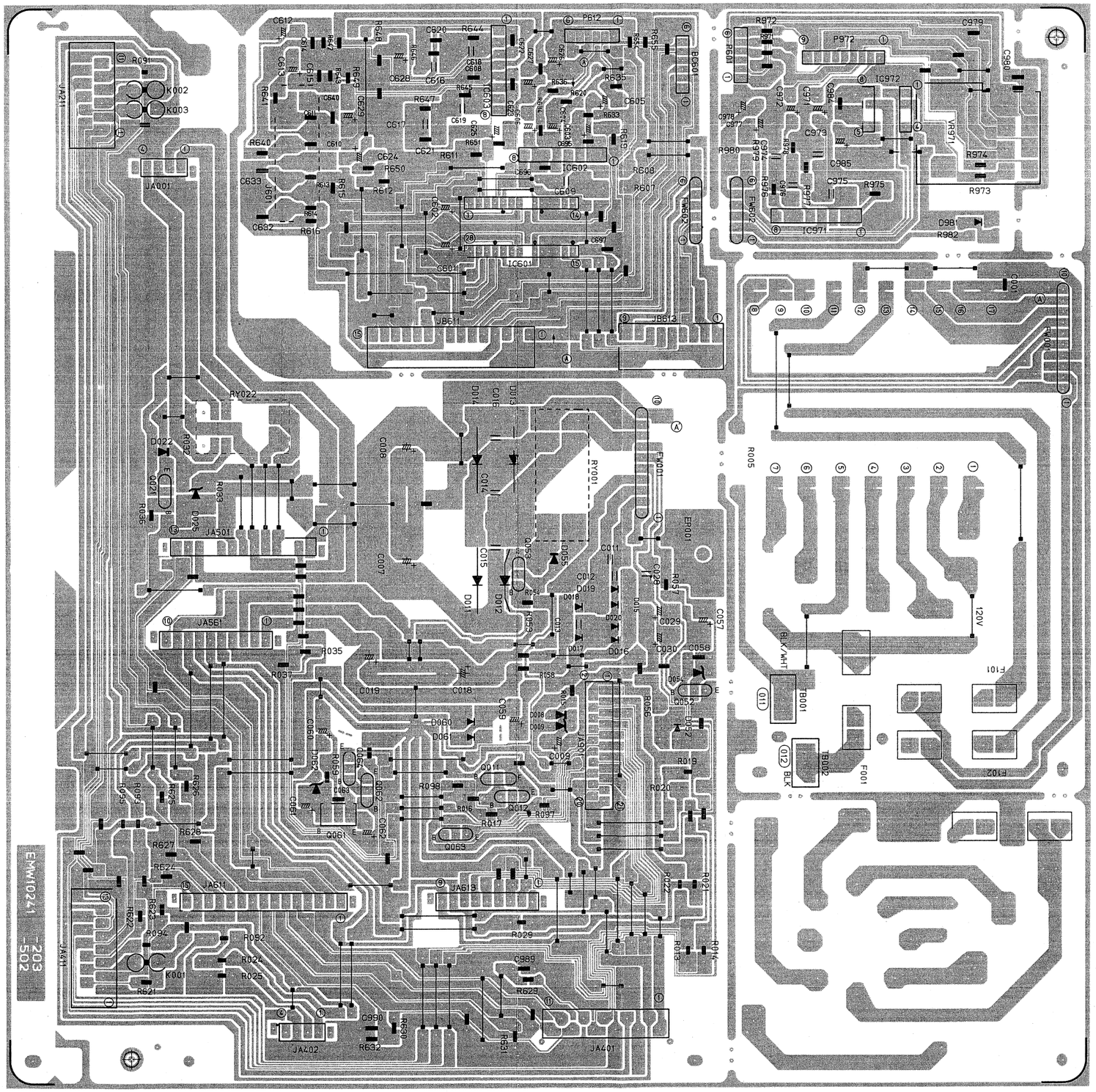






Printed Circuit Boards

(1) Input Selector & Power Supply PCB (ENH-222) : Universal



(No. 20389) (No. 20389)

PARTS LIST

Note : All printed circuit boards and its assemblies are not available as service parts.

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■ ENB-165 ☐ System & Deck Controller PC Board Ass'y 2-16
■ ENH-222 ☐ Input Selector & Power Supply PC Board Ass'y 2-19
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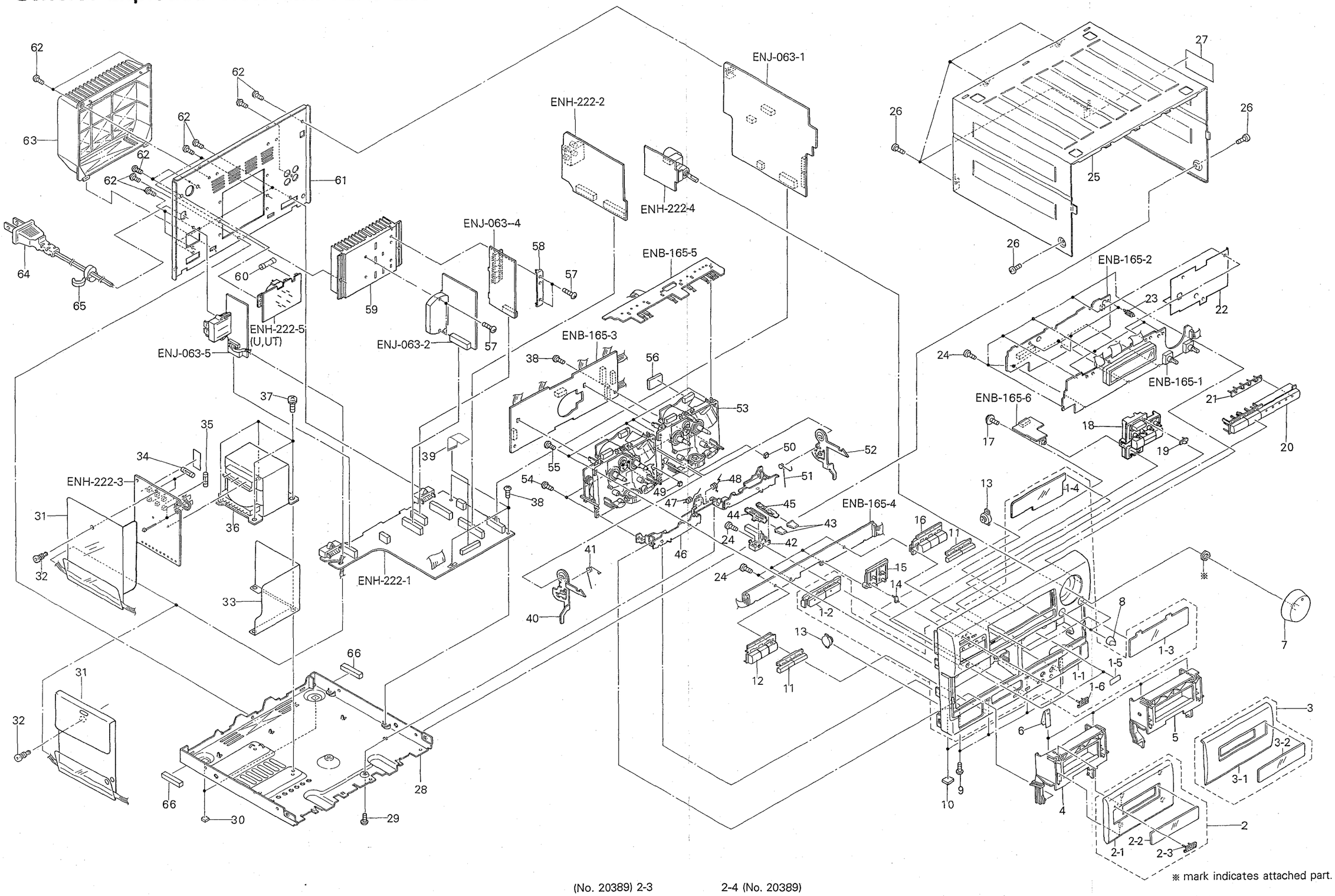
General Exploded View and Parts List



※ mark indicates attached part.

Parts List

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-DXMXC5BKE(S	FRONT PANEL ASSY	1		Excpet J
		EFP-DXMXC5BKJ(S	FRONT PANEL ASSY	1		J
	1-1	E102559-006SM	FRONT PANEL	1		
	1-2	E207374-003SS	PUSH BUTTON ASSY	1	DOLBY	
	1-3	E307965-008	WINDOW SCREEN	1		A
		E307965-008	WINDOW SCREEN	1		BS
		E307965-008	WINDOW SCREEN	1		C
		E307965-008	WINDOW SCREEN	1		EF
		E307965-008	WINDOW SCREEN	1		EN
		E307965-008	WINDOW SCREEN	1		G
		E307965-008	WINDOW SCREEN	1		GI
		E307965-007	WINDOW SCREEN	1		J
		E307965-008	WINDOW SCREEN	1		U
		E307965-008	WINDOW SCREEN	1		UT
	1-4	E406980-002SM	FL SCREEN	1		J
	1-5	E69777-003	REFLECTION PLATE	2		
	1-6	E406971-221	JVC MARK	1		
	2	E207365-006SA	CASSETTE LID ASSY	1	(A)	
	2-1	E207365-006SM	CASSETTE LID	1	(A)	
	2-2	E307919-001SM	WINDOW SCREEN	1	(A)	
	2-3	E406971-221	JVC MARK	1	(A)	
	3	E207367-006SA	CASSETTE LID ASSY	1	(B)	
	3-1	E207367-006SM	CASSETTE LID	1	(B)	
	3-2	E307919-001SM	WINDOW SCREEN	1	(B)	
	4	E207381-001SM	CASSETTE HOLDER	1	(A)	
	5	E207382-001SM	CASSETTE HOLDER	1	(B)	
	6	E406713-001	CASSETE SPRING	4		
	7	E306549-002SS	VOLUME KNOB	1		
	8	E406691-224SM	BALANCE KNOB	2		
	9	SBST3006Z	SCREW	4		
	10	E406855-006SM	SPACER	2	FRONT FOOT	
	11	E207389-004SM	PUSH BUTTON	2	FF / REW	
	12	E207160-223SS	PUSH BUTTON ASSY	1	A-PLAY	
	13	E304434-002	DAMPER ASSY	2		
	14	E406673-001	INDICATOR	1		
	15	E207364-004SS	PUSH BUTTON	1	REC	
	16	E207163-224SS	PUSH BUTTON ASSY	1	B-PLAY	
	17	E407098-001	SPECIAL SCREW	1		
	18	E207397-002SM	PUSH BUTTON	1	POEWR	
	19	E406938-221	POWER INDICATOR	1		
	20	E207395-003SM	PUSH BUTTON	1	SOURCE	
	21	E307967-001	SOURCE INDICATOR	1		
	22	E308459-003SM	SHIELD PLATE	1		
	23	E307112-001	FASTENER	3		
	24	SDSF2610Z	SCREW	13		
	25	E207399-005	METAL COVER	1		
	26	SDSG3006M	SCREW	6		
	27	E308522-021	RATING LABEL	1		UT
	28	E102561-001SM	CHASSIS BASE	1		
	29	SBST3006M	SCREW	1		

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	30	E406855-007SM	SPACER	2	REAR FOOT	
	31	E308248-001SM	PROTECTOR COVER	1		J
		E308088-003SM	PROTECTOR COVER	1		C
		E308088-003SM	PROTECTOR COVER	1		A
		E308088-003SM	PROTECTOR COVER	1		EN
		E308088-003SM	PROTECTOR COVER	1		EF
		E308088-003SM	PROTECTOR COVER	1		BS
		E308088-003SM	PROTECTOR COVER	1		G
		E308088-003SM	PROTECTOR COVER	1		GI
		E308088-003SM	PROTECTOR COVER	1		U
		E308088-003SM	PROTECTOR COVER	1		UT
	32	E48729-008	PLASTIC RIVET	1		
	33	E407086-001	SHIELD COVER	1	SH001	
⚠	34	QMF51U1-1R6S	FUSE	2	F101 , F102 (T1.6A / 125V)	J
⚠		QMF51U1-1R6S	FUSE	2	F101 , F102 (T1.6A / 125V)	C
⚠		QMF51E2-1R2J1BS	FUSE	2	F101 , F102 (T1.2A / 250V)	BS
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	A
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	EF
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	EN
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	G
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	GI
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	U
⚠		QMF51E2-1R25J1	FUSE	2	F101 , F102 (T1.25A / 250V)	UT
⚠	35	QMF51U1-2R5S	FUSE	1	F001 (T2.5A / 125V)	J
⚠		QMF51U1-2R5S	FUSE	1	F001 (T2.5A / 125V)	C
⚠		QMF51E2-1R6J1	FUSE	1	F001 (T1.6A / 250V)	U
⚠		QMF51E2-1R6J1	FUSE	1	F001 (T1.6A / 250V)	UT
⚠		QMF51E2-R80J1BS	FUSE	1	F001 (T0.8A / 250V)	BS
⚠		QMF51E2-R80J1	FUSE	1	F001 (T0.8A / 250V)	A
⚠		QMF51E2-R80J1	FUSE	1	F001 (T0.8A / 250V)	EF
⚠		QMF51E2-R80J1	FUSE	1	F001 (T0.8A / 250V)	EN
⚠		QMF51E2-R80J1	FUSE	1	F001 (T0.8A / 250V)	G
⚠		QMF51E2-R80J1	FUSE	1	F001 (T0.8A / 250V)	GI
⚠	36	ETP1070-26JAJ	POWER TRANSFORMER	1	T001	J
⚠		ETP1070-26JAJ	POWER TRANSFORMER	1	T001	C
⚠		ETP1070-26FAJ	POWER TRANSFORMER	1	T001	U
⚠		ETP1070-26FAJ	POWER TRANSFORMER	1	T001	UT
⚠		ETP1070-26EAJBS	POWER TRANSFORMER	1	T001	BS
⚠		ETP1070-26EAJ	POWER TRANSFORMER	1	T001	A
⚠		ETP1070-26EAJ	POWER TRANSFORMER	1	T001	EF
⚠		ETP1070-26EAJ	POWER TRANSFORMER	1	T001	EN
⚠		ETP1070-26EAJ	POWER TRANSFORMER	1	T001	G
⚠		ETP1070-26EAJ	POWER TRANSFORMER	1	T001	GI
	37	E65389-002	SPECIAL SCREW	4		
	38	SBSG3008CC	SCREW	4		
	39	EWR621K-34TTJ3	FLAT WIRE	1	FC901	
	40	E307599-222SM	EJECT LEVER	1	(A)	
	41	E406669-221SM	EJECT SPRING	1	(A)	
	42	E307921-002	EJECT GUIDE	1		
	43	E406667-223SM	EJECT BUTTON	2		

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	44	E406668-221SM	PUSH PLATE	1	(A)	
	45	E406668-222SM	PUSH PLATE	1	(B)	
	46	E207360-001SM	HOLDER BRACKET	1		
	47	E406671-222SM	HOLDER SPRING	1	(A)	
	48	E406672-222SM	HOLDER SPRING	1	(B)	
	49	E407213-001SM	SPACER	1	(A)	
	50	E407301-001SM	SPACER	1	(B)	
	51	E406670-221SM	EJECT SPRING	1	(B)	
	52	E307600-222SM	EJECT LEVER	1	(B)	
	53	------	CASSETTE MECHANISM ASSY	1	SEE PAGE 2-9	
	54	SBST3008C	SCREW	4		
	55	SBSF3010C	SCREW	4		
	56	EXO014008R60S13	SPACER	1		
	57	SBSG3014CC	SCREW	4		
	58	E406969-001SM	LEAF SPRING	1		
	59	E307908-001SM	HEAT SINK	1		A
		E307908-001SM	HEAT SINK	1		EF
		E307908-001SM	HEAT SINK	1		EN
		E307908-001SM	HEAT SINK	1		BS
		E307908-001SM	HEAT SINK	1		G
		E307908-001SM	HEAT SINK	1		GI
		E307908-001SM	HEAT SINK	1		U
		E307908-001SM	HEAT SINK	1		UT
		E307908-002SM	HEAT SINK	1		J
		E307908-002SM	HEAT SINK	1		C
⚠	60	QMF51E2-R80J1	FUSE	1	F002 (T0.8A/250V)	U
⚠		QMF51E2-R80J1	FUSE	1	F002 (T0.8A/250V)	UT
	61	E207418-021SM	REAR PANEL	1		J
		E207418-022SM	REAR PANEL	1		C
		E207418-023SM	REAR PANEL	1		U
		E207418-023SM	REAR PANEL	1		UT
		E207418-024SM	REAR PANEL	1		A
		E207418-024SM	REAR PANEL	1		BS
		E207418-025SM	REAR PANEL	1		EF
		E207418-025SM	REAR PANEL	1		EN
		E207418-025SM	REAR PANEL	1		G
		E207418-025SM	REAR PANEL	1		GI
	62	E73273-003	SPECIAL SCREW	11		
		E73273-003	SPECIAL SCREW	2		U
		E73273-003	SPECIAL SCREW	2		UT
	63	E207356-001SM	REAR COVER	1		
⚠	64	QMP1D00-200H	POWER CORD	1		J
⚠		QMP1D00-200H	POWER CORD	1		C
⚠		QMP25F0-244	POWER CORD	1		A
⚠		QMP5530-0085BS	POWER CORD	1		BS
⚠		QMP3900-200	POWER CORD	1		EF
⚠		QMP3900-200	POWER CORD	1		EN
⚠		QMP3900-200	POWER CORD	1		G
⚠		QMP3900-200	POWER CORD	1		GI
⚠		QMP7520-200	POWER CORD	1		U

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
⚠		QMP7520-200	POWER CORD	1		UT
⚠	65	QHS3876-162	CORD STOPPER	1		J
⚠		QHS3876-162	CORD STOPPER	1		C
⚠		QHS3876-162	CORD STOPPER	1		A
⚠		QHS3876-162	CORD STOPPER	1		EF
⚠		QHS3876-162	CORD STOPPER	1		EN
⚠		QHS3876-162	CORD STOPPER	1		G
⚠		QHS3876-162	CORD STOPPER	1		GI
⚠		QHS3876-162	CORD STOPPER	1		U
⚠		QHS3876-162	CORD STOPPER	1		UT
⚠		QHS3876-162BS	CORD STOPPER	1		BS
	66	E407604-001SM	SPACER	2		
	—	E75803-001	CAUTION LABEL	1		J
		E75804-001	CAUTION LABEL	1		C
	—	E45858-002	LABEL	1		C
	—	QZL1031-101	LABEL	1		EF
	—	E70027-001	LABEL	1		EN

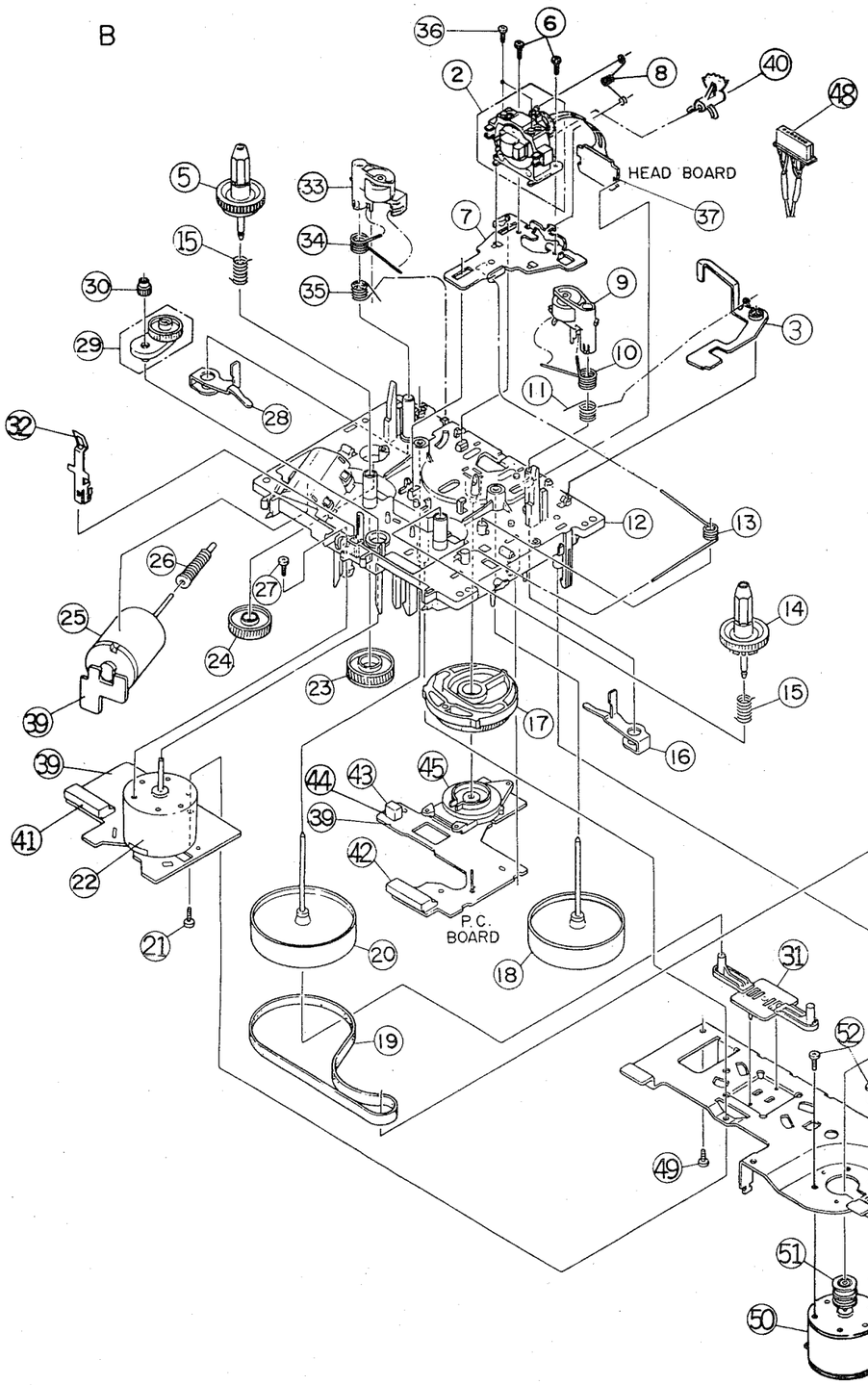
⚠ SAFETY PARTS

The Marks for Designated Areas

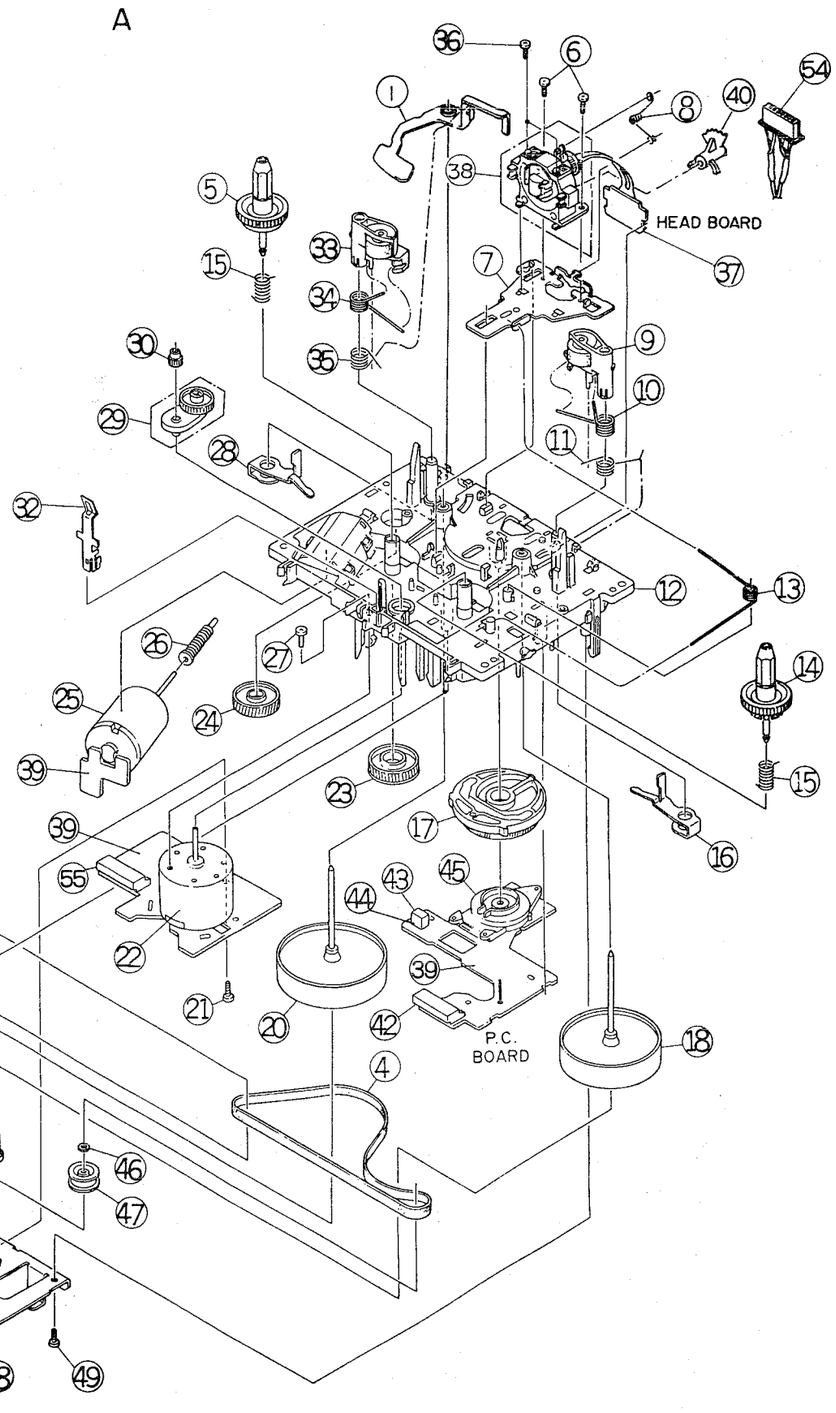
J ..... the U.S.A. C ..... Canada A ..... Australia BS ..... the U.K.
EN .... Scandinavia EF ..... Continental Europe G ..... Germany GI ..... Itary
UT .... Taiwan U ..... Universal type **No mark indicates all areas.**

Cassette Mechanism Ass'y and Parts List

B



A



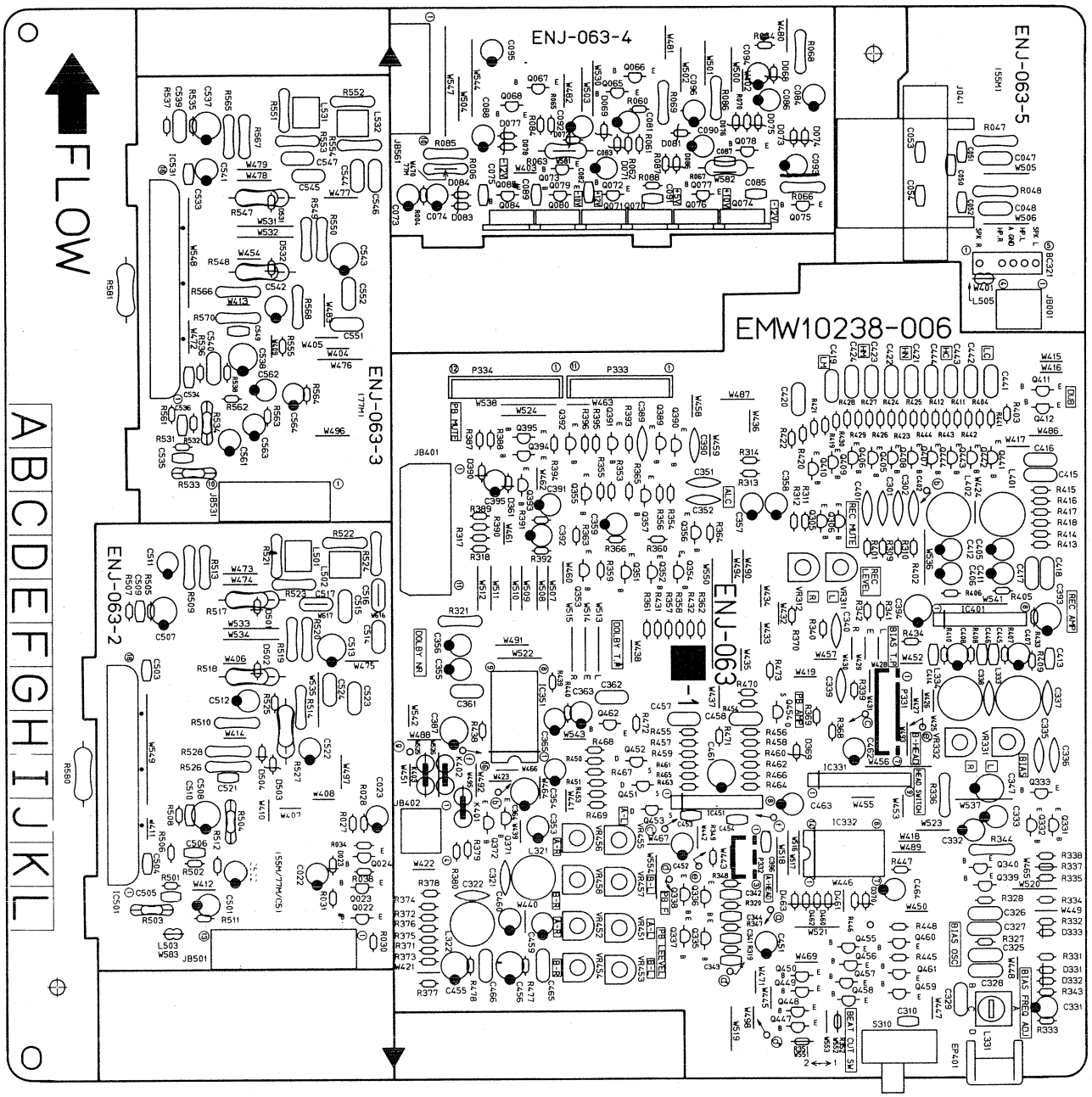
■ Parts List (Cassette Mechanism)

Item	Part Number	Part Name	Q'ty	Description	Areas
1	VKL6954-007	EJECT SAFETY LEVER	1	A MECHANISM	
2	VKS3551-00C	HEAD BLOCK ASSY	1	B MECHANISM	
3	VKL6943-005	EJECT SAFETY LEVER	1	B MECHANISM	
4	VKB3001-050	CAPSTAN BELT	1	A MECHANISM	
5	VKS5321-00D	REEL ASSY	2	RIGHT	
6	SDST2004Z	SCREW	4	FOR HEAD MOUNT ASSY	
7	VKL6942-00E	HEAD BASE ASSY	2		
8	VKW4994-001	HEAD SPRING	2		
9	VKP4221-00C	PINCH ROLLER ASSY	2	LEFT	
10	VKW4982-001	TORSION SPRING	2	LEFT	
11	VKW4933-005	TORSION SPRING	2	LEFT	
12	VKS1112-30E	CHASSIS BASE ASSY	2		
13	VKW4930-002	RETURN SPRING	2		
14	VKS3480-005	REEL ASSY	2	LEFT	
15	VKW4928-003	B.T SPRING	4	FOR REEL ASSY	
16	VKL6940-002	PINCH ROLLER LEVER	2	LEFT	
17	VKS2209-006	CONTROLLER CAM	2		
18	VKF3186-00C	FLYWHEEL ASSY	2	LEFT	
19	VKB3001-048	CAPSTAN BELT	1	B MECHANISM	
20	VKF3184-00C	FLYWHEEL ASSY	2	RIGHT	
21	SDSF2608Z	SCREW	2	PC BOARD - FM BRACKET	
22	MMN-6F4RA38	DC MOTOR	2	REEL	
23	VKS5331-002	GEAR (6)	2		
24	VKS5330-004	GEAR (5)	2		
25	MXN-13FB12F	DC MOTOR	2	CAM	
26	VKS5329-002	GEAR (4)	2		
27	SDSP2605Z	SCREW	2	CHASSIS BASE - D.C. MOTOR	
28	VKL6939-002	PINCH ROLLER LEVER	2	RIGHT	
29	VKS5325-00F	FR ARM ASSY	2		
30	VKS5328-002	REEL MOTOR GEAR	2		
31	VKS5327-003	THRUST PALTE	2		
32	VKY4628-002	PACK SPRING	2		
33	VKP4219-00C	PINCH ROLLER ASSY	2	RIGHT	
34	VKW4981-001	TORSION SPRING	2	RIGHT	
35	VKW4932-005	TORSION SPRING	2	RIGHT	
36	VKZ4629-003	SCREW	4		
37	VMW4816-001	PRINTED BOARD	2		
38	VKS3550-00C	HEAD MOUNT ASSY	1	A MECHANISM	
39	VMW2345-002	PRINTED BOARD	2		
40	VKS3485-002	HEAD BLOCK GEAR	2		
41	VMC0249-R08	CONNECTOR	1	B MECHANISM	
42	VMC0249-R07	CONNECTOR	2		
43	DN6851A	HALL IC	2		
44	VKS3487-002	IC HALL	2		
45	VKS3587-00A	CAM SWITCH ASSY	2		
46	WDL163525-4	WASHER	1		
47	VKR4631-002	IDLER PULLEY	1		
48	VKM3419-00E	FM BRACKET	1		
49	SDSF2605Z	SCREW	4	CHASSIS BASE - BRACKET	
50	MMI-6H2LWSK	MOTOR	1	CAPSTAN	
51	VKR4632-003	MOTOR PULLEY	1		
52	SPSP2603Z	SCREW	2		
53	VDM107P-040	HEAD WIRE	1	B MECHANISM	
54	VDM103P-040	HEAD WIRE	1	A MECHANISM	
55	VMC0249-R04	CONNECTOR	1	A MECHANISM	

Printed Circuit Board Ass'y and Parts List

■ENJ-063☐ Deck , Regulator & Amplifier PC Board Ass'y

Note : ENJ-063 ☐ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENJ-063 [E]	the U.S.A.
ENJ-063 [F]	Canada
ENJ-063 [G]	Australia , the U.K. Scandinavia Continental Europe Taiwan , Universal Type
ENJ-063 [H]	Germany , Italy

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q022	2SC1740S(R,S)	SILICON	ROHM	
	Q023	2SC1740S(R,S)	SILICON	ROHM	
	Q024	2SA733A(P,Q)	SILICON	NEC	
	Q065	DTC144ES	SILICON	ROHM	
	Q066	DTA114YS	SILICON	ROHM	
	Q067	DTA144ES	SILICON	ROHM	
	Q068	DTC114YS	SILICON	ROHM	
	Q070	2SD2061(E,F)	SILICON	ROHM	
	Q071	2SD2061(E,F)	SILICON	ROHM	
	Q072	2SC1740S(R,S)	SILICON	ROHM	
	Q073	2SC1740S(R,S)	SILICON	ROHM	E
	Q073	2SC1740S(R,S)	SILICON	ROHM	F
	Q076	2SD2061(E,F)	SILICON	ROHM	
	Q077	2SC1740S(R,S)	SILICON	ROHM	
	Q078	2SC1740S(R,S)	SILICON	ROHM	E
	Q078	2SC1740S(R,S)	SILICON	ROHM	F
	Q079	2SA564A(Q,R)	SILICON	MATSUSHITA	
	Q080	2SB1187(E,F)	SILICON	ROHM	
	Q084	2SB1187(E,F)	SILICON	ROHM	
	Q085	2SA564A(Q,R)	SILICON	MATSUSHITA	
	Q305	2SD2144S(VW)	SILICON	ROHM	
	Q306	2SD2144S(VW)	SILICON	ROHM	
	Q332	2SC1740S(R,S)	SILICON	ROHM	
	Q333	2SC1740S(R,S)	SILICON	ROHM	
	Q335	DTC144ES	SILICON	ROHM	
	Q336	DTC144ES	SILICON	ROHM	
	Q337	DTC144ES	SILICON	ROHM	
	Q338	DTC144ES	SILICON	ROHM	
	Q339	2SC1740S(R,S)	SILICON	ROHM	
	Q340	2SC1740S(R,S)	SILICON	ROHM	
	Q351	2SC1740S(R,S)	SILICON	ROHM	
	Q352	2SC1740S(R,S)	SILICON	ROHM	
	Q353	2SC1740S(R,S)	SILICON	ROHM	
	Q354	2SC1740S(R,S)	SILICON	ROHM	
	Q355	2SC1740S(R,S)	SILICON	ROHM	
	Q356	2SC1740S(R,S)	SILICON	ROHM	
	Q357	2SC1740S(R,S)	SILICON	ROHM	
	Q371	2SD2144S(VW)	SILICON	ROHM	
	Q372	2SD2144S(VW)	SILICON	ROHM	
	Q389	DTC144ES	SILICON	ROHM	
	Q390	DTC144ES	SILICON	ROHM	
	Q391	2SD2144S(VW)	SILICON	ROHM	
	Q392	2SD2144S(VW)	SILICON	ROHM	
	Q393	DTA144ES	SILICON	ROHM	
	Q394	DTC144ES	SILICON	ROHM	
	Q395	DTA144ES	SILICON	ROHM	
	Q407	DTC144TS	SILICON	ROHM	
	Q408	DTC144TS	SILICON	ROHM	
	Q411	DTC144TS	SILICON	ROHM	
	Q412	DTC144TS	SILICON	ROHM	
	Q441	DTC144TS	SILICON	ROHM	
	Q442	DTC144TS	SILICON	ROHM	
	Q443	DTC144TS	SILICON	ROHM	
	Q444	DTC144TS	SILICON	ROHM	
	Q447	DTC114YS	SILICON	ROHM	
	Q448	DTC114YS	SILICON	ROHM	
	Q449	DTC114YS	SILICON	ROHM	
	Q450	DTC114YS	SILICON	ROHM	
	Q451	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q452	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q453	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q454	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q455	DTC114YS	SILICON	ROHM	
	Q456	DTC114YS	SILICON	ROHM	
	Q457	DTC114YS	SILICON	ROHM	
	Q458	DTC114YS	SILICON	ROHM	
	Q459	DTC114YS	SILICON	ROHM	
	Q460	2SA933S(R,S)	SILICON	ROHM	
	Q461	DTA114YS	SILICON	ROHM	
	Q462	DTC144ES	SILICON	ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC331	BA3126N	I.C.	ROHM	
	IC332	BU4066B	I.C.	ROHM	
	IC351	HA12136AT	I.C.	HITACHI	
	IC401	BA15218N	I.C.	ROHM	
	IC451	UPC1228HA	I.C.	NEC	
	IC501	STK4141MK5	I.C.	SANYO	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D023	1SS133	SILICON	ROHM	
	D071	RD13JSB3	ZENER	NEC	
	D072	MTZ13JC	ZENER	ROHM	
	D075	MTZ11JC	ZENER	ROHM	
	D076	MTZ12JC	ZENER	ROHM	
	D077	MTZ11JC	ZENER	ROHM	
	D078	MTZ12JC	ZENER	ROHM	
	D081	MTZ6.8JC	ZENER	ROHM	
	D083	MTZ13JC	ZENER	ROHM	
	D084	RD13JSB3	ZENER	NEC	
	D086	MTZ6.2JC	ZENER	ROHM	
	D333	1SS133	SILICON	ROHM	
	D361	1SS133	SILICON	ROHM	
	D369	MTZ7.5JC	ZENER	ROHM	
	D370	MTZ7.5JC	ZENER	ROHM	
	D390	1SS133	SILICON	ROHM	
	D460	1SS133	SILICON	ROHM	
	D461	1SS133	SILICON	ROHM	
	D462	1SS133	SILICON	ROHM	
	D463	1SS133	SILICON	ROHM	
	D501	1SS133	SILICON	ROHM	
	D502	1SS133	SILICON	ROHM	
	D503	MTZ12JC	ZENER	ROHM	
	D504	1SS133	SILICON	ROHM	F
	D504	1SS133	SILICON	ROHM	G
	D504	1SS133	SILICON	ROHM	H

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C022	QETB1CM-226	22MF	16V	ELECTRO	
	C023	QETB1AM-476	47MF	10V	ELECTRO	
	C047	QFLB1HJ-103	0.01MF	50V	MYLAR	H
	C048	QFLB1HJ-103	0.01MF	50V	MYLAR	H
	C051	QCBB1HK-221	220PF	50V	CERAMIC	H
	C052	QCBB1HK-221	220PF	50V	CERAMIC	H
	C053	QCXB1CM-222	2200PF	16V	CERAMIC	E
	C053	QCXB1CM-222	2200PF	16V	CERAMIC	F
	C053	QCXB1CM-222	2200PF	16V	CERAMIC	G
	C053	QCHB1EZ-223	0.022MF	25V	CERAMIC	H
	C054	QCHB1EZ-223	0.022MF	25V	CERAMIC	H
	C073	QETB1EM-226	22MF	25V	ELECTRO	
	C074	QETB1EM-476	47MF	25V	ELECTRO	
	C075	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C081	QETB1EM-226	22MF	25V	ELECTRO	
	C082	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C083	QETB1EM-226	22MF	25V	ELECTRO	
	C086	QETB1EM-226	22MF	25V	ELECTRO	
	C087	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C088	QETB1EM-226	22MF	25V	ELECTRO	
	C089	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C090	QETB1EM-226	22MF	25V	ELECTRO	
	C091	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C092	QETB1EM-226	22MF	25V	ELECTRO	
	C094	QETB1EM-226	22MF	25V	ELECTRO	
	C095	QETB1EM-226	22MF	25V	ELECTRO	
	C096	EEZ5009-106	10MF		ELECTRO	
	C301	QCY21HK-182	1800PF	50V	CERAMIC	
	C302	QCY21HK-182	1800PF	50V	CERAMIC	
	C310	QCBB1HK-471	470PF	50V	CERAMIC	
	C321	QCY21HK-101	100PF	50V	CERAMIC	
	C322	QCY21HK-101	100PF	50V	CERAMIC	
	C325	QFLB1HJ-222	2200PF	50V	MYLAR	
	C326	QFLB1HJ-222	2200PF	50V	MYLAR	
	C327	QFLB1HJ-682	6800PF	50V	MYLAR	
	C328	QFLB1HJ-273	0.027MF	50V	MYLAR	
	C329	QFP81HG-822	8200PF	50V	POLY	
	C331	QETB1HM-105	1MF	50V	ELECTRO	
	C332	QETB1HM-105	1MF	50V	ELECTRO	
	C333	QETB1EM-106	10MF	25V	ELECTRO	
	C335	QCS21HJ-101	100PF	50V	CERAMIC	
	C336	QCS21HJ-101	100PF	50V	CERAMIC	
	C337	QCS21HJ-101	100PF	50V	CERAMIC	
	C338	QCS21HJ-101	100PF	50V	CERAMIC	
	C339	QCY21HK-122	1200PF	50V	CERAMIC	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C340	QCY21HK-122	1200PF	50V	CERAMIC	
	C341	QCBB1HK-331	330PF	50V	CERAMIC	
	C342	QCBB1HK-331	330PF	50V	CERAMIC	
	C343	QCXB1CM-122	1200PF	16V	CERAMIC	
	C344	QCXB1CM-122	1200PF	16V	CERAMIC	
	C347	QETB1CM-107	100MF	16V	ELECTRO	
	C351	QCF21HP-473	0.047MF	50V	CERAMIC	
	C352	QCF21HP-473	0.047MF	50V	CERAMIC	
	C353	QETB1HM-105	1MF	50V	ELECTRO	
	C354	QETB1HM-105	1MF	50V	ELECTRO	
	C355	QETB1HM-105	1MF	50V	ELECTRO	
	C356	QETB1HM-105	1MF	50V	ELECTRO	
	C357	QETB1EM-106	10MF	25V	ELECTRO	
	C358	QETB1EM-106	10MF	25V	ELECTRO	
	C359	QETB1EM-106	10MF	25V	ELECTRO	
	C361	QFV81HJ-224	0.22MF	50V	T.FILM	
	C362	QFV81HJ-224	0.22MF	50V	T.FILM	
	C363	QETB1HM-475	4.7MF	50V	ELECTRO	
	C364	QETB1CM-107	100MF	16V	ELECTRO	
	C365	QETB1HM-475	4.7MF	50V	ELECTRO	
	C387	QETB1CM-107	100MF	16V	ELECTRO	
	C389	QCF21HP-223	0.022MF	50V	CERAMIC	
	C390	QCF21HP-223	0.022MF	50V	CERAMIC	
	C391	QETB1EM-106	10MF	25V	ELECTRO	
	C392	QETB1EM-106	10MF	25V	ELECTRO	
	C393	QETB1CM-107	100MF	16V	ELECTRO	
	C394	QETB1CM-107	100MF	16V	ELECTRO	
	C395	QETB1CM-476	47MF	16V	ELECTRO	
	C396	QCHB1EZ-223	0.022MF	25V	CERAMIC	H
	C401	QCF21HP-473	0.047MF	50V	CERAMIC	
	C402	QCF21HP-473	0.047MF	50V	CERAMIC	
	C405	QETB1HM-225	2.2MF	50V	ELECTRO	
	C406	QETB1HM-225	2.2MF	50V	ELECTRO	
	C407	QETB1HM-225	2.2MF	50V	ELECTRO	
	C408	QETB1HM-225	2.2MF	50V	ELECTRO	
	C411	QETB1EM-106	10MF	25V	ELECTRO	
	C412	QETB1EM-106	10MF	25V	ELECTRO	
	C413	QCBB1HK-271	270PF	50V	CERAMIC	
	C414	QCBB1HK-271	270PF	50V	CERAMIC	
	C415	QFLB1HJ-822	8200PF	50V	MYLAR	
	C416	QFLB1HJ-822	8200PF	50V	MYLAR	
	C417	QFLB1HJ-682	6800PF	50V	MYLAR	
	C418	QFLB1HJ-682	6800PF	50V	MYLAR	
	C421	QFLB1HJ-332	3300PF	50V	MYLAR	
	C422	QFLB1HJ-332	3300PF	50V	MYLAR	
	C441	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C442	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C443	QFLB1HJ-273	0.027MF	50V	MYLAR	
	C444	QFLB1HJ-273	0.027MF	50V	MYLAR	
	C445	QCSB1HJ-470	47PF	50V	CERAMIC	
	C446	QCSB1HJ-470	47PF	50V	CERAMIC	
	C451	QETB1HM-225	2.2MF	50V	ELECTRO	
	C452	QETB1HM-225	2.2MF	50V	ELECTRO	
	C453	QCBB1HK-101	100PF	50V	CERAMIC	E
	C453	QCBB1HK-101	100PF	50V	CERAMIC	F
	C453	QCBB1HK-101	100PF	50V	CERAMIC	G
	C453	QCBB1HK-471	470PF	50V	CERAMIC	H
	C454	QCBB1HK-101	100PF	50V	CERAMIC	E
	C454	QCBB1HK-101	100PF	50V	CERAMIC	F
	C454	QCBB1HK-101	100PF	50V	CERAMIC	G
	C454	QCBB1HK-471	470PF	50V	CERAMIC	H
	C455	QETB1AM-107	100MF	10V	ELECTRO	
	C456	QETB1AM-107	100MF	10V	ELECTRO	
	C457	QFLB1HJ-822	8200PF	50V	MYLAR	
	C458	QFLB1HJ-822	8200PF	50V	MYLAR	
	C459	QETB1HM-105	1MF	50V	ELECTRO	
	C460	QETB1HM-105	1MF	50V	ELECTRO	
	C461	QETB1CM-107	100MF	16V	ELECTRO	
	C462	QETB1CM-226	22MF	16V	ELECTRO	
	C463	QETB1HM-106	10MF	50V	ELECTRO	
	C464	QETB1HM-106	10MF	50V	ELECTRO	
	C465	QFLB1HJ-153	0.015MF	50V	MYLAR	
	C466	QFLB1HJ-153	0.015MF	50V	MYLAR	
	C501	EEZ5009-106	10MF		ELECTRO	
	C502	EEZ5009-106	10MF		ELECTRO	
	C503	QCBB1HK-101	100PF	50V	CERAMIC	E
	C503	QCBB1HK-101	100PF	50V	CERAMIC	F
	C503	QCBB1HK-101	100PF	50V	CERAMIC	G
	C503	QCBB1HK-221	220PF	50V	CERAMIC	H
	C504	QCBB1HK-101	100PF	50V	CERAMIC	E
	C504	QCBB1HK-101	100PF	50V	CERAMIC	F
	C504	QCBB1HK-101	100PF	50V	CERAMIC	G
	C504	QCBB1HK-221	220PF	50V	CERAMIC	H
	C505	QCBB1HK-101	100PF	50V	CERAMIC	E
	C505	QCBB1HK-101	100PF	50V	CERAMIC	F
	C505	QCBB1HK-101	100PF	50V	CERAMIC	G
	C505	QCSB1HJ-270	27PF	50V	CERAMIC	H
	C506	QCBB1HK-101	100PF	50V	CERAMIC	E
	C506	QCBB1HK-101	100PF	50V	CERAMIC	F
	C506	QCBB1HK-101	100PF	50V	CERAMIC	G
	C506	QCSB1HJ-270	27PF	50V	CERAMIC	H
	C507	QETB1EM-227	220MF	25V	ELECTRO	
	C508	QETB1EM-227	220MF	25V	ELECTRO	
	C509	QCT30CH-5R6	5.6PF	50V	CERAMIC	E
	C509	QCT30CH-5R6	5.6PF	50V	CERAMIC	F

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C509	QCT30CH-5R6	5.6PF	50V	CERAMIC	G
	C509	QCSB1HJ-100	10PF	50V	CERAMIC	H
	C510	QCT30CH-5R6	5.6PF	50V	CERAMIC	E
	C510	QCT30CH-5R6	5.6PF	50V	CERAMIC	F
	C510	QCT30CH-5R6	5.6PF	50V	CERAMIC	G
	C510	QCSB1HJ-100	10PF	50V	CERAMIC	H
	C511	QETB1HM-226	22MF	50V	ELECTRO	
	C512	QETB1HM-226	22MF	50V	ELECTRO	
	C513	QETB1HM-227	220MF	50V	ELECTRO	E
	C513	QETB1HM-227	220MF	50V	ELECTRO	F
	C513	QETB1HM-107	100MF	50V	ELECTRO	G
	C513	QETB1HM-107	100MF	50V	ELECTRO	H
	C514	QFLB1HJ-473	0.047MF	50V	MYLAR	E
	C514	QFLB1HJ-104	0.1MF	50V	MYLAR	F
	C514	QFLB1HJ-104	0.1MF	50V	MYLAR	G
	C514	QFLB1HJ-104	0.1MF	50V	MYLAR	H
	C515	QFLB1HJ-473	0.047MF	50V	MYLAR	E
	C515	QFLB1HJ-104	0.1MF	50V	MYLAR	F
	C515	QFLB1HJ-104	0.1MF	50V	MYLAR	G
	C515	QFLB1HJ-104	0.1MF	50V	MYLAR	H
	C516	QFLB1HJ-104	0.1MF	50V	MYLAR	F
	C516	QFLB1HJ-104	0.1MF	50V	MYLAR	G
	C516	QFLB1HJ-104	0.1MF	50V	MYLAR	H
	C517	QFLB1HJ-104	0.1MF	50V	MYLAR	F
	C517	QFLB1HJ-104	0.1MF	50V	MYLAR	G
	C517	QFLB1HJ-104	0.1MF	50V	MYLAR	H
	C521	QCBB1HK-681	680PF	50V	CERAMIC	G
	C521	QCBB1HK-681	680PF	50V	CERAMIC	H
	C522	QETB1HM-226	22MF	50V	ELECTRO	
	C523	QFLB1HJ-473	0.047MF	50V	MYLAR	
	C524	QFLB1HJ-473	0.047MF	50V	MYLAR	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R004	QRD167J-222	2.2K	1/6W	CARBON	
⚠	R006	QRD14CJ-2R7S	2.7	1/4W	UNF.CARBON	
	R027	QRD167J-104	100K	1/6W	CARBON	
	R028	QRD167J-823	82K	1/6W	CARBON	
	R030	QRD167J-473	47K	1/6W	CARBON	
	R031	QRD167J-682	6.8K	1/6W	CARBON	
	R034	QRD167J-104	100K	1/6W	CARBON	
	R038	QRD167J-104	100K	1/6W	CARBON	
⚠	R047	QRD14CJ-100S	10	1/4W	UNF.CARBON	H
⚠	R048	QRD14CJ-100S	10	1/4W	UNF.CARBON	H
	R060	QRD167J-103	10K	1/6W	CARBON	
	R061	QRD167J-152	1.5K	1/6W	CARBON	
	R062	QRD167J-471	470	1/6W	CARBON	
⚠	R063	QRX012J-R68AM	0.68	1W	M.FILM	E
⚠	R063	QRX012J-R68AM	0.68	1W	M.FILM	F
	R065	QRD167J-103	10K	1/6W	CARBON	
⚠	R067	QRX012J-R47AM	0.47	1W	M.FILM	E
⚠	R067	QRX012J-R47AM	0.47	1W	M.FILM	F
⚠	R068	QRD14CJ-1ROS	1	1/4W	UNF.CARBON	
⚠	R069	QRD14CJ-1ROS	1	1/4W	UNF.CARBON	
	R070	QRD167J-332	3.3K	1/6W	CARBON	
	R084	QRD167J-332	3.3K	1/6W	CARBON	
⚠	R085	QRD14CJ-1ROS	1	1/4W	UNF.CARBON	
⚠	R086	QRD14CJ-1ROS	1	1/4W	UNF.CARBON	
	R087	QRD167J-103	10K	1/6W	CARBON	
	R088	QRD167J-103	10K	1/6W	CARBON	
	R309	QRD167J-753	75K	1/6W	CARBON	
	R310	QRD167J-753	75K	1/6W	CARBON	
	R311	QRD167J-103	10K	1/6W	CARBON	
	R312	QRD167J-103	10K	1/6W	CARBON	
	R313	QRD167J-153	15K	1/6W	CARBON	
	R314	QRD167J-153	15K	1/6W	CARBON	
	R317	QRD167J-123	12K	1/6W	CARBON	
	R318	QRD167J-123	12K	1/6W	CARBON	
	R319	QRD167J-683	68K	1/6W	CARBON	
	R320	QRD167J-683	68K	1/6W	CARBON	
⚠	R321	QRZ0077-220	22	1/4W	FUSIBLE	
	R327	QRD167J-473	47K	1/6W	CARBON	
	R328	QRD167J-473	47K	1/6W	CARBON	
	R332	QRD167J-332	3.3K	1/6W	CARBON	
	R333	QRD167J-104	100K	1/6W	CARBON	
	R334	QRD167J-181	180	1/6W	CARBON	
	R335	QRD167J-201	200	1/6W	CARBON	
⚠	R336	QRZ0077-100	10	1/4W	FUSIBLE	
	R339	QRD167J-623	62K	1/6W	CARBON	
	R340	QRD167J-623	62K	1/6W	CARBON	
	R341	QRD167J-100	10	1/6W	CARBON	
	R342	QRD167J-100	10	1/6W	CARBON	
	R343	QRD167J-222	2.2K	1/6W	CARBON	
⚠	R344	QRZ0077-5R6	5.6	1/4W	FUSIBLE	
	R347	QRD167J-224	220K	1/6W	CARBON	
	R348	QRD167J-224	220K	1/6W	CARBON	
	R349	QRD167J-223	22K	1/6W	CARBON	
	R351	QRD167J-102	1K	1/6W	CARBON	
	R352	QRD167J-102	1K	1/6W	CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R353	QRD167J-153	15K 1/6W CARBON	
	R354	QRD167J-153	15K 1/6W CARBON	
	R355	QRD167J-243	24K 1/6W CARBON	
	R356	QRD167J-243	24K 1/6W CARBON	
	R357	QRD167J-332	3.3K 1/6W CARBON	
	R358	QRD167J-332	3.3K 1/6W CARBON	
	R359	QRD167J-223	22K 1/6W CARBON	
	R360	QRD167J-223	22K 1/6W CARBON	
	R361	QRD167J-561	560 1/6W CARBON	
	R362	QRD167J-561	560 1/6W CARBON	
	R363	QRD167J-202	2K 1/6W CARBON	
	R364	QRD167J-202	2K 1/6W CARBON	
	R365	QRD167J-103	10K 1/6W CARBON	
	R366	QRD167J-105	1M 1/6W CARBON	
	R368	QRD167J-271	270 1/6W CARBON	
	R369	QRD167J-102	1K 1/6W CARBON	
	R370	QRD167J-102	1K 1/6W CARBON	
	R371	QRD167J-562	5.6K 1/6W CARBON	
	R372	QRD167J-562	5.6K 1/6W CARBON	
	R373	QRD167J-103	10K 1/6W CARBON	
	R374	QRD167J-103	10K 1/6W CARBON	
	R375	QRD167J-473	47K 1/6W CARBON	
	R376	QRD167J-473	47K 1/6W CARBON	
	R377	QRD167J-103	10K 1/6W CARBON	
	R378	QRD167J-103	10K 1/6W CARBON	
	R379	QRD167J-103	10K 1/6W CARBON	
	R380	QRD167J-103	10K 1/6W CARBON	
	R387	QRD167J-103	10K 1/6W CARBON	
	R388	QRD167J-102	1K 1/6W CARBON	
	R389	QRD161J-221	220 1/6W CARBON	
	R390	QRD161J-221	220 1/6W CARBON	
	R391	QRD167J-822	8.2K 1/6W CARBON	
	R392	QRD167J-822	8.2K 1/6W CARBON	
	R393	QRD167J-562	5.6K 1/6W CARBON	
	R394	QRD167J-562	5.6K 1/6W CARBON	
	R395	QRD167J-103	10K 1/6W CARBON	
	R396	QRD167J-103	10K 1/6W CARBON	
	R401	QRD167J-223	22K 1/6W CARBON	
	R402	QRD167J-223	22K 1/6W CARBON	
	R403	QRD167J-362	3.6K 1/6W CARBON	
	R404	QRD167J-362	3.6K 1/6W CARBON	
	R405	QRD167J-683	68K 1/6W CARBON	
	R406	QRD167J-683	68K 1/6W CARBON	
	R407	QRD167J-153	15K 1/6W CARBON	
	R408	QRD167J-153	15K 1/6W CARBON	
	R409	QRD167J-153	15K 1/6W CARBON	
	R410	QRD167J-153	15K 1/6W CARBON	
	R411	QRD167J-202	2K 1/6W CARBON	
	R412	QRD167J-202	2K 1/6W CARBON	
	R413	QRD167J-182	1.8K 1/6W CARBON	
	R414	QRD167J-182	1.8K 1/6W CARBON	
	R415	QRD167J-301	300 1/6W CARBON	
	R416	QRD167J-301	300 1/6W CARBON	
	R417	QRD167J-241	240 1/6W CARBON	
	R418	QRD167J-241	240 1/6W CARBON	
	R423	QRD167J-122	1.2K 1/6W CARBON	
	R424	QRD167J-122	1.2K 1/6W CARBON	
	R425	QRD167J-682	6.8K 1/6W CARBON	
	R426	QRD167J-682	6.8K 1/6W CARBON	
	R431	QRD167J-394	390K 1/6W CARBON	
	R432	QRD167J-394	390K 1/6W CARBON	
	R433	QRD161J-221	220 1/6W CARBON	
	R434	QRD161J-221	220 1/6W CARBON	
	R438	QRD167J-183	18K 1/6W CARBON	
	R439	QRD167J-103	10K 1/6W CARBON	
	R440	QRD167J-223	22K 1/6W CARBON	
	R441	QRD167J-122	1.2K 1/6W CARBON	
	R442	QRD167J-122	1.2K 1/6W CARBON	
	R443	QRD167J-242	2.4K 1/6W CARBON	
	R444	QRD167J-242	2.4K 1/6W CARBON	
	R445	QRD167J-224	220K 1/6W CARBON	
	R446	QRD167J-103	10K 1/6W CARBON	
	R447	QRD167J-103	10K 1/6W CARBON	
	R448	QRD167J-223	22K 1/6W CARBON	
	R450	QRD167J-102	1K 1/6W CARBON	
	R451	QRD167J-102	1K 1/6W CARBON	
	R453	QRD167J-470	47 1/6W CARBON	
	R454	QRD167J-470	47 1/6W CARBON	
	R455	QRD167J-334	330K 1/6W CARBON	
	R456	QRD167J-334	330K 1/6W CARBON	
	R457	QRD167J-432	4.3K 1/6W CARBON	
	R458	QRD167J-432	4.3K 1/6W CARBON	
	R459	QRD167J-302	3K 1/6W CARBON	
	R460	QRD167J-302	3K 1/6W CARBON	
	R461	QRD167J-562	5.6K 1/6W CARBON	
	R462	QRD167J-562	5.6K 1/6W CARBON	
	R463	QRD167J-752	7.5K 1/6W CARBON	
	R464	QRD167J-752	7.5K 1/6W CARBON	
	R465	QRD167J-223	22K 1/6W CARBON	
	R466	QRD167J-223	22K 1/6W CARBON	
	R467	QRD167J-105	1M 1/6W CARBON	
	R468	QRD167J-105	1M 1/6W CARBON	
	R469	QRD167J-105	1M 1/6W CARBON	
	R470	QRD167J-105	1M 1/6W CARBON	
	R471	QRD167J-471	470 1/6W CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R472	QRD167J-472	4.7K 1/6W CARBON	
	R473	QRD167J-472	4.7K 1/6W CARBON	
	R477	QRD167J-223	22K 1/6W CARBON	
	R478	QRD167J-223	22K 1/6W CARBON	
	R501	QRD167J-104	100K 1/6W CARBON	
	R502	QRD167J-104	100K 1/6W CARBON	
⚠	R503	QRD14CJ-561S	560 1/4W UNF.CARBON	
⚠	R504	QRD14CJ-561S	560 1/4W UNF.CARBON	
	R505	QRD167J-471	470 1/6W CARBON	
	R506	QRD167J-471	470 1/6W CARBON	
	R507	QRD167J-104	100K 1/6W CARBON	
	R508	QRD167J-104	100K 1/6W CARBON	
⚠	R509	QRD14CJ-272S	2.7K 1/4W UNF.CARBON	
⚠	R510	QRD14CJ-272S	2.7K 1/4W UNF.CARBON	
	R511	QRD167J-102	1K 1/6W CARBON	
	R512	QRD167J-102	1K 1/6W CARBON	
⚠	R513	QRD14CJ-272S	2.7K 1/4W UNF.CARBON	
⚠	R514	QRD14CJ-272S	2.7K 1/4W UNF.CARBON	
⚠	R517	QRX012J-R22AM	0.22 1W M.FILM	
⚠	R518	QRX012J-R22AM	0.22 1W M.FILM	
⚠	R519	QRD14CJ-101S	100 1/4W UNF.CARBON	E
⚠	R519	QRD14CJ-101S	100 1/4W UNF.CARBON	F
⚠	R519	QRZ0077-101	100 1/4W FUSIBLE	G
⚠	R519	QRZ0077-101	100 1/4W FUSIBLE	H
⚠	R520	QRZ0077-100	10 1/4W FUSIBLE	
⚠	R521	QRD14CJ-100S	10 1/4W UNF.CARBON	
⚠	R522	QRD14CJ-100S	10 1/4W UNF.CARBON	
⚠	R523	QRD14CJ-100S	10 1/4W UNF.CARBON	
⚠	R524	QRD14CJ-100S	10 1/4W UNF.CARBON	
	R525	QRD167J-472	4.7K 1/6W CARBON	
⚠	R526	QRD14CJ-100S	10 1/4W UNF.CARBON	
⚠	R527	QRG022J-122AM	1.2K 2W O.M.FILM	
⚠	R528	QRZ0077-100	10 1/4W FUSIBLE	
⚠	R580	QRG022J-122AM	1.2K 2W O.M.FILM	
	VR311	QVPA601-503A	50K VARIABLE	
	VR312	QVPA601-503A	50K VARIABLE	
	VR331	QVPA601-204A	200K VARIABLE	
	VR332	QVPA601-204A	200K VARIABLE	
	VR451	QVPA601-201A	200 VARIABLE	
	VR452	QVPA601-201A	200 VARIABLE	
	VR453	QVPA601-201A	200 VARIABLE	
	VR454	QVPA601-201A	200 VARIABLE	
	VR455	QVPA601-203A	20K VARIABLE	
	VR456	QVPA601-203A	20K VARIABLE	
	VR457	QVPA601-203A	20K VARIABLE	
	VR458	QVPA601-203A	20K VARIABLE	

⚠ : SAFETY PARTS

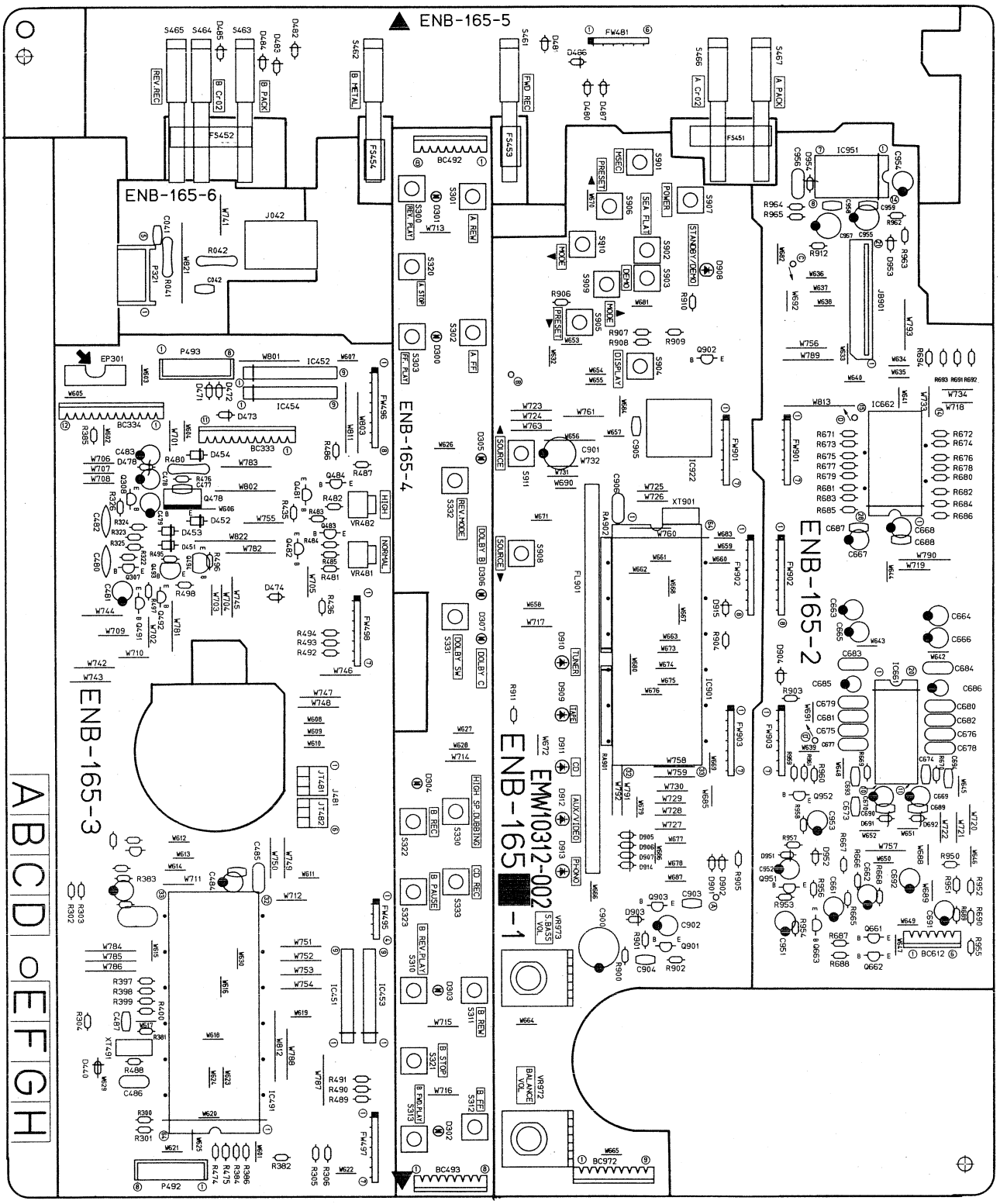
Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	J041	EMB90TV-402A	SPEAKER TERMINAL	
	K401	ENZ8101-007	INDUCTOR	H
	K402	ENZ8101-007	INDUCTOR	H
	L321	EQL2106-223	INDUCTOR	
	L322	EQL2106-223	INDUCTOR	
	L331	ENZ6002-010	OSCILLATOR COIL	
	L333	EQL2106-223	INDUCTOR	
	L334	EQL2106-223	INDUCTOR	
	L401	EQL2106-562	INDUCTOR	
	L402	EQL2106-562	INDUCTOR	
	L501	EQL0001-R45	INDUCTOR	
	L502	EQL0001-R45	INDUCTOR	
	L503	EQL4004-2R2	INDUCTOR	H
	L505	EQL4004-1R0	INDUCTOR	E
	L505	EQL4004-1R0	INDUCTOR	F
	P331	EMV5133-007	PLUG ASSY(7PIN)	
	P332	EMV5133-003	PLUG ASSY(3PIN)	
	P333	EMV5142-911	PLUG ASSY(11PIN)	
	P334	EMV5142-912	PLUG ASSY(12PIN)	
	S310	QSS6A12-E01	SLIDE SWITCH(BEAT CUT)	
	BC321	EWS245-010	SOCKET WIRE(5PIN)	
	EP401	E70225-002	EARTH PLATE	
	JB001	EMV7125-004R	CONNECTOR(4PIN)	
	JB401	EMV7140-L11R	CONNECTOR(11PIN)	
	JB402	EMV7125-004R	CONNECTOR(4PIN)	
	JB501	EMV7125-013R	CONNECTOR(13PIN)	
	JB561	EMV7125-010R	CONNECTOR(10PIN)	

⚠ : SAFETY PARTS

■ENB-165☐ System & Deck Controller PC Board Ass'y

Note : ENB-165 ☐ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENB-165 [A]	the U.S.A., Canada
ENB-165 [B]	Australia, Scandinavia Continental Europe Taiwan, Universal Type
ENB-165 [C]	the U.K.
ENH-165 [D]	Germany, Italy

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q307	2SC1740S(R,S)	SILICON	ROHM	
	Q308	2SC1740S(R,S)	SILICON	ROHM	
	Q478	2SD2037(E,F)	SILICON	ROHM	
	Q481	2SC1740S(R,S)	SILICON	ROHM	
	Q482	2SC1740S(R,S)	SILICON	ROHM	
	Q483	2SA933S(R,S)	SILICON	ROHM	
	Q484	2SA933S(R,S)	SILICON	ROHM	
	Q491	DTC144ES	SILICON	ROHM	
	Q492	DTC144ES	SILICON	ROHM	
	Q493	2SA934(Q,R)	SILICON	ROHM	
	Q494	2SA934(Q,R)	SILICON	ROHM	
	Q661	2SD2144S(VW)	SILICON	ROHM	
	Q662	2SD2144S(VW)	SILICON	ROHM	
	Q663	DTA144ES	SILICON	ROHM	
	Q901	DTC114YS	SILICON	ROHM	
	Q902	DTA114ES	SILICON	ROHM	
	Q903	DTA114ES	SILICON	ROHM	
	Q951	2SC1740S(R,S)	SILICON	ROHM	
	Q952	2SC1740S(R,S)	SILICON	ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC451	BA6218	I.C.	ROHM	
	IC452	BA6218	I.C.	ROHM	
	IC453	BA6218	I.C.	ROHM	
	IC454	BA6218	I.C.	ROHM	
	IC491	HD6414081SC34	I.C.	HITACHI	
	IC661	M5243P12	I.C.	MITSUBISHI	
	IC662	TC9163N	I.C.	TOSHIBA	
	IC901	MN1712O2JHD	I.C.	MATSUSHITA	
	IC922	SPS-42O-1	I.C.	SANYO	
	IC951	XR1097CP	I.C.	EXAR JAPAN	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D300	SLR-34MC3F	L.E.D.	ROHM	
	D301	SLR-34MC3F	L.E.D.	ROHM	
	D302	SLR-34MC3F	L.E.D.	ROHM	
	D303	SLR-34MC3F	L.E.D.	ROHM	
	D304	SLR-34VC3F	L.E.D.	ROHM	
	D305	SLR-34VC3F	L.E.D.	ROHM	
	D306	SLR-34VC3F	L.E.D.	ROHM	
	D451	1SR139-200	SILICON	ROHM	
	D452	1SR139-200	SILICON	ROHM	
	D453	1SR139-200	SILICON	ROHM	
	D454	1SR139-200	SILICON	ROHM	
	D471	1SS133	SILICON	ROHM	
	D472	1SS133	SILICON	ROHM	
	D473	1SS133	SILICON	ROHM	
	D474	1SS133	SILICON	ROHM	
	D478	MTZ6.2JC	ZENER	ROHM	
	D480	1SS133	SILICON	ROHM	
	D481	1SS133	SILICON	ROHM	
	D483	1SS133	SILICON	ROHM	
	D484	1SS133	SILICON	ROHM	
	D485	1SS133	SILICON	ROHM	
	D486	1SS133	SILICON	ROHM	
	D487	1SS133	SILICON	ROHM	
	D691	MTZ7.5JC	ZENER	ROHM	
	D692	MTZ7.5JC	ZENER	ROHM	
	D901	1SS133	SILICON	ROHM	
	D902	1SS133	SILICON	ROHM	
	D903	1SS133	SILICON	ROHM	
	D904	1SS133	SILICON	ROHM	
	D905	1SS133	SILICON	ROHM	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D906	1SS133	SILICON	ROHM	
	D907	1SS133	SILICON	ROHM	
	D908	SLR-34VC3F	L.E.D.	ROHM	A
	D908	SLR-34VC3F	L.E.D.	ROHM	B
	D908	SLA-580LT3F	L.E.D.	ROHM	C
	D908	SLR-34VC3F	L.E.D.	ROHM	D
	D909	SLR-34VC3F	L.E.D.	ROHM	
	D910	SLR-34VC3F	L.E.D.	ROHM	
	D911	SLR-34VC3F	L.E.D.	ROHM	
	D912	SLR-34VC3F	L.E.D.	ROHM	
	D913	SLR-34VC3F	L.E.D.	ROHM	
	D914	1SS133	SILICON	ROHM	
	D915	1SS133	SILICON	ROHM	
	D951	1SS133	SILICON	ROHM	
	D952	1SS133	SILICON	ROHM	
	D953	1SS133	SILICON	ROHM	
	D954	MTZ5.1JC	ZENER	ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C041	QCBB1HK-221	220PF	50V	CERAMIC	
	C042	QCBB1HK-221	220PF	50V	CERAMIC	
	C477	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C478	QETB1AM-476	47MF	10V	ELECTRO	
	C479	QETB1AM-476	47MF	10V	ELECTRO	
	C480	QCF21HP-223	0.022MF	50V	CERAMIC	
	C481	QETB1HM-105	1MF	50V	ELECTRO	
	C482	QCF21HP-223	0.022MF	50V	CERAMIC	
	C483	QETB1CM-476	47MF	16V	ELECTRO	
	C484	QETB1CM-476	47MF	16V	ELECTRO	
	C485	QCZ0205-155	1.5MF	25V	CERAMIC	
	C486	QFLB1HJ-473	0.047MF	50V	MYLAR	
	C487	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C661	EEZ5009-106	10MF		ELECTRO	
	C662	EEZ5009-106	10MF		ELECTRO	
	C663	QETB1EM-476	47MF	25V	ELECTRO	
	C664	QETB1EM-476	47MF	25V	ELECTRO	
	C665	QETB1EM-476	47MF	25V	ELECTRO	
	C666	QETB1EM-476	47MF	25V	ELECTRO	
	C667	QETB1CM-476	47MF	16V	ELECTRO	
	C668	QETB1CM-476	47MF	16V	ELECTRO	
	C669	QETB1CM-226	22MF	16V	ELECTRO	
	C670	QETB1CM-226	22MF	16V	ELECTRO	
	C673	QCGB1HK-821	820PF	50V	CERAMIC	
	C674	QCGB1HK-821	820PF	50V	CERAMIC	
	C675	QFLB1HJ-471	470PF	50V	MYLAR	
	C676	QFLB1HJ-471	470PF	50V	MYLAR	
	C677	QFLB1HJ-272	2700PF	50V	MYLAR	
	C678	QFLB1HJ-272	2700PF	50V	MYLAR	
	C679	QFLB1HJ-822	8200PF	50V	MYLAR	
	C680	QFLB1HJ-822	8200PF	50V	MYLAR	
	C681	QFV81HJ-473	0.047MF	50V	T.FILM	
	C682	QFV81HJ-473	0.047MF	50V	T.FILM	
	C683	QFV81HJ-154	0.15MF	50V	T.FILM	
	C684	QFV81HJ-154	0.15MF	50V	T.FILM	
	C685	QER51HM-684	0.68MF	50V	ELECTRO	
	C686	QER51HM-684	0.68MF	50V	ELECTRO	
	C691	EEZ5009-106	10MF		ELECTRO	
	C692	EEZ5009-106	10MF		ELECTRO	
	C699	QCS21HJ-561	560PF	50V	CERAMIC	
	C900	QETBOJM-108	1000MF	6.3V	ELECTRO	
	C901	QEK51AM-227	220MF	10V	ELECTRO	
	C902	QETB1HM-225	2.2MF	50V	ELECTRO	
	C903	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C904	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C905	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C906	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C951	QETB1EM-106	10MF	25V	ELECTRO	
	C952	QETB1HM-105	1MF	50V	ELECTRO	
	C953	QCF21HP-473	0.047MF	50V	CERAMIC	
	C954	QETB1CM-476	47MF	16V	ELECTRO	
	C955	QETBOJM-227	220MF	6.3V	ELECTRO	
	C956	QFLB1HJ-102	1000PF	50V	MYLAR	
	C957	QETBOJM-227	220MF	6.3V	ELECTRO	
	C958	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C959	QCVB1CM-103	0.01MF	16V	CERAMIC	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R041	QRD12CJ-331S	330	1/2W	R.NETWORK	
	R042	QRD12CJ-331S	330	1/2W	R.NETWORK	
	R300	QRD167J-331	330	1/6W	CARBON	
	R301	QRD167J-331	330	1/6W	CARBON	
	R302	QRD167J-331	330	1/6W	CARBON	
	R303	QRD167J-331	330	1/6W	CARBON	
	R304	QRD167J-561	560	1/6W	CARBON	
	R305	QRD167J-561	560	1/6W	CARBON	
	R306	QRD167J-561	560	1/6W	CARBON	
	R322	QRD167J-753	75K	1/6W	CARBON	
	R323	QRD167J-105	1M	1/6W	CARBON	
	R324	QRD167J-103	10K	1/6W	CARBON	
	R325	QRD167J-753	75K	1/6W	CARBON	
	R326	QRD167J-105	1M	1/6W	CARBON	
	R381	QRD167J-472	4.7K	1/6W	CARBON	
	R382	QRD167J-103	10K	1/6W	CARBON	
	R383	QRD167J-271	270	1/6W	CARBON	
	R384	QRD167J-103	10K	1/6W	CARBON	
	R385	QRD167J-151	150	1/6W	CARBON	
	R397	QRD167J-103	10K	1/6W	CARBON	
	R398	QRD167J-103	10K	1/6W	CARBON	
	R399	QRD167J-103	10K	1/6W	CARBON	
	R400	QRD167J-103	10K	1/6W	CARBON	
	R435	QRD167J-103	10K	1/6W	CARBON	
	R436	QRD167J-103	10K	1/6W	CARBON	
	R474	QRD167J-222	2.2K	1/6W	CARBON	
	R475	QRD167J-103	10K	1/6W	CARBON	
	R476	QRD167J-102	1K	1/6W	CARBON	
⚠	R480	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	
	R481	QRD167J-153	15K	1/6W	CARBON	
	R482	QRD167J-183	18K	1/6W	CARBON	
	R483	QRD167J-184	180K	1/6W	CARBON	
	R484	QRD167J-224	220K	1/6W	CARBON	
	R485	QRD167J-683	68K	1/6W	CARBON	
	R486	QRD167J-224	220K	1/6W	CARBON	
	R487	QRD167J-224	220K	1/6W	CARBON	
	R488	QRD167J-105	1M	1/6W	CARBON	
	R489	QRD167J-103	10K	1/6W	CARBON	
	R490	QRD167J-103	10K	1/6W	CARBON	
	R491	QRD167J-103	10K	1/6W	CARBON	
	R492	QRD167J-103	10K	1/6W	CARBON	
	R493	QRD167J-103	10K	1/6W	CARBON	
	R494	QRD167J-103	10K	1/6W	CARBON	
	R495	QRD167J-103	10K	1/6W	CARBON	
	R496	QRD167J-103	10K	1/6W	CARBON	
	R497	QRD167J-102	1K	1/6W	CARBON	
	R498	QRD167J-102	1K	1/6W	CARBON	
	R665	QRD167J-104	100K	1/6W	CARBON	
	R666	QRD167J-104	100K	1/6W	CARBON	
	R667	QRD167J-103	10K	1/6W	CARBON	
	R668	QRD167J-103	10K	1/6W	CARBON	
	R669	QRD167J-103	10K	1/6W	CARBON	
	R670	QRD167J-103	10K	1/6W	CARBON	
	R671	QRD167J-333	33K	1/6W	CARBON	
	R672	QRD167J-333	33K	1/6W	CARBON	
	R673	QRD167J-562	5.6K	1/6W	CARBON	
	R674	QRD167J-562	5.6K	1/6W	CARBON	
	R675	QRD167J-243	24K	1/6W	CARBON	
	R676	QRD167J-243	24K	1/6W	CARBON	
	R677	QRD167J-912	9.1K	1/6W	CARBON	
	R678	QRD167J-912	9.1K	1/6W	CARBON	
	R679	QRD167J-183	18K	1/6W	CARBON	
	R680	QRD167J-183	18K	1/6W	CARBON	
	R681	QRD167J-472	4.7K	1/6W	CARBON	
	R682	QRD167J-472	4.7K	1/6W	CARBON	
	R683	QRD167J-123	12K	1/6W	CARBON	
	R684	QRD167J-123	12K	1/6W	CARBON	
	R685	QRD167J-303	30K	1/6W	CARBON	
	R686	QRD167J-303	30K	1/6W	CARBON	
	R687	QRD167J-103	10K	1/6W	CARBON	
	R688	QRD167J-103	10K	1/6W	CARBON	
	R689	QRD167J-472	4.7K	1/6W	CARBON	
	R690	QRD167J-472	4.7K	1/6W	CARBON	
	R691	QRD167J-331	330	1/6W	CARBON	
	R692	QRD167J-331	330	1/6W	CARBON	
	R693	QRD167J-331	330	1/6W	CARBON	
	R694	QRD167J-331	330	1/6W	CARBON	
	R900	QRD167J-101	100	1/6W	CARBON	
	R901	QRD167J-104	100K	1/6W	CARBON	
	R902	QRD167J-103	10K	1/6W	CARBON	
	R903	QRD167J-104	100K	1/6W	CARBON	
	R904	QRD167J-473	47K	1/6W	CARBON	
	R905	QRD167J-104	100K	1/6W	CARBON	
	R906	QRD167J-473	47K	1/6W	CARBON	
	R907	QRD167J-473	47K	1/6W	CARBON	
	R908	QRD167J-473	47K	1/6W	CARBON	
	R909	QRD167J-473	47K	1/6W	CARBON	
	R910	QRD161J-221	220	1/6W	CARBON	
	R911	QRD167J-270	27	1/6W	CARBON	
	R912	QRD167J-431	430	1/6W	CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R950	QRD167J-104	100K	1/6W	CARBON	
	R951	QRD167J-104	100K	1/6W	CARBON	
	R952	QRD167J-104	100K	1/6W	CARBON	
	R953	QRD167J-204	200K	1/6W	CARBON	
	R954	QRD167J-474	470K	1/6W	CARBON	
	R955	QRD167J-512	5.1K	1/6W	CARBON	
	R956	QRD167J-102	1K	1/6W	CARBON	
	R957	QRD167J-104	100K	1/6W	CARBON	
	R958	QRD167J-103	10K	1/6W	CARBON	
	R959	QRD167J-273	27K	1/6W	CARBON	
	R960	QRD167J-473	47K	1/6W	CARBON	
	R961	QRD167J-562	5.6K	1/6W	CARBON	
	R962	QRD167J-223	22K	1/6W	CARBON	
	R963	QRD167J-223	22K	1/6W	CARBON	
	R964	QRD167J-152	1.5K	1/6W	CARBON	
	R965	QRD167J-563	56K	1/6W	CARBON	
	VR481	QVPA603-103A	10K		VARIABLE	
	VR482	QVPA603-203A	20K		VARIABLE	
	VR972	QVJB84M-E54B	50K		VARIABLE	
	VR973	QVJB84A-EF5C	250K		VARIABLE	

⚠ : SAFETY PARTS

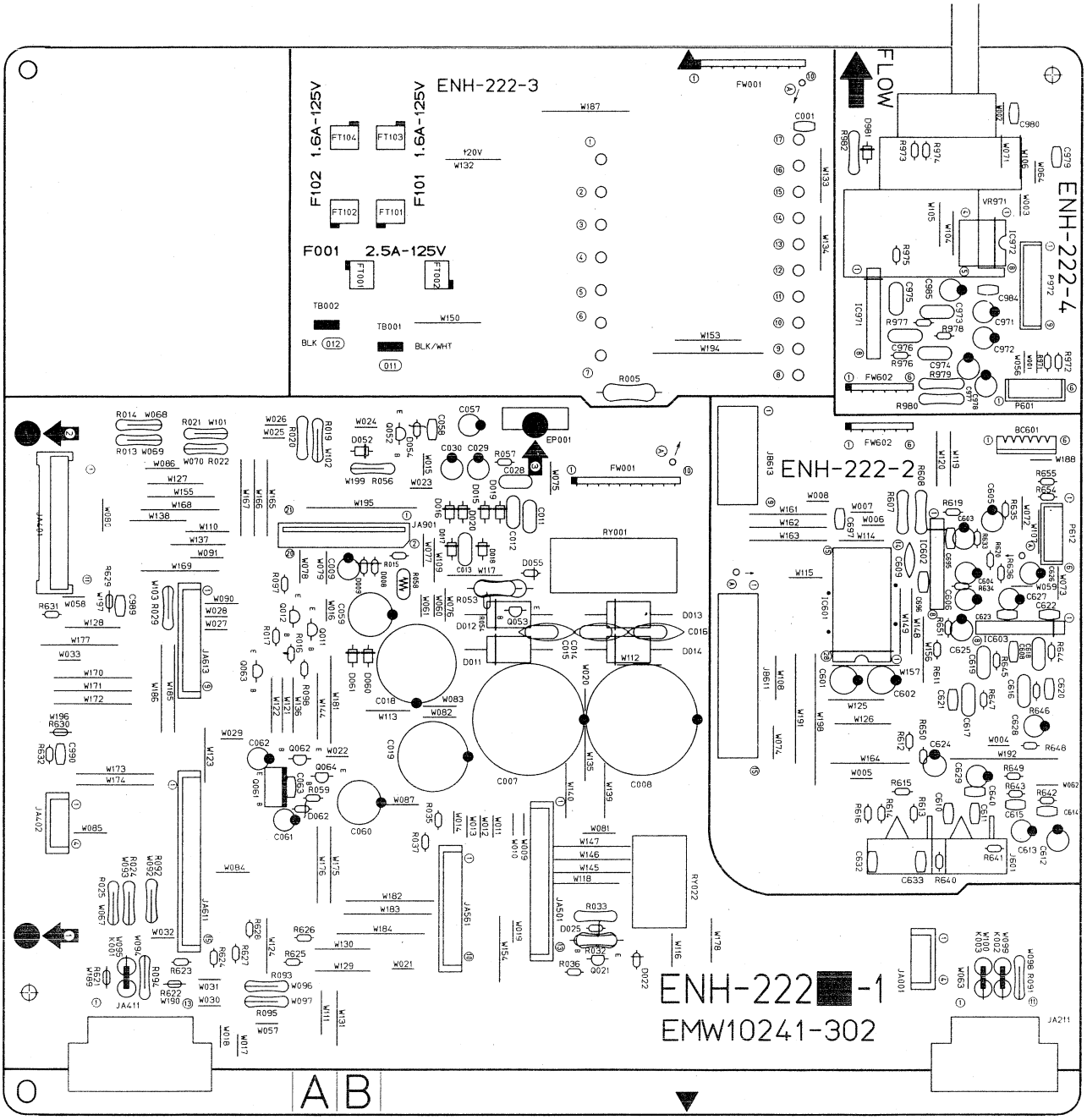
Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	J042	QMS3L40-ED0H	MINI JACK	
	P321	EMV5133-005KR	PLUG ASSY(5PIN)	
	P492	EMV5142-908	PLUG ASSY(8PIN)	
	P493	EMV5142-908	PLUG ASSY(8PIN)	
	S300	ESP0001-023M	TACT SWITCH(REV.PLAY)	
	S301	ESP0001-023M	TACT SWITCH(A REW)	
	S302	ESP0001-023M	TACT SWITCH(A FF)	
	S303	ESP0001-023M	TACT SWITCH(FF PLAY)	
	S310	ESP0001-023M	TACT SWITCH(B REV.PLAY)	
	S311	ESP0001-023M	TACT SWITCH(B REW)	
	S312	ESP0001-023M	TACT SWITCH(B FF)	
	S313	ESP0001-023M	TACT SWITCH(B FWD.PLAY)	
	S320	ESP0001-023M	TACT SWITCH(A STOP)	
	S321	ESP0001-023M	TACT SWITCH(B STOP)	
	S322	ESP0001-023M	TACT SWITCH(B REC)	
	S323	ESP0001-023M	TACT SWITCH(B PAUSE)	
	S330	ESP0001-023M	TACT SWITCH(HIGH SP. DUBBING)	
	S331	ESP0001-023M	TACT SWITCH(DOLBY SW)	
	S332	ESP0001-023M	TACT SWITCH(REV.MODE)	
	S333	ESP0001-023M	TACT SWITCH(CD REC)	
	S461	ESB1100-007	LEAF SWITCH(FWD REC)	
	S463	ESB1100-007	LEAF SWITCH(B PACK)	
	S464	ESB1100-007	LEAF SWITCH(B CrO2)	
	S465	ESB1100-007	LEAF SWITCH(REV.REC)	
	S466	ESB1100-007	LEAF SWITCH(A CrO2)	
	S467	ESB1100-007	LEAF SWITCH(PRESET ▶)	
	S901	ESP0001-023M	TACT SWITCH(PRESET ◀)	
	S902	ESP0001-023M	TACT SWITCH(POWER)	
	S903	ESP0001-023M	TACT SWITCH(SOURCE ▶)	
	S904	ESP0001-023M	TACT SWITCH(MODE ▲)	
	S905	ESP0001-023M	TACT SWITCH(A PACK)	
	S906	ESP0001-023M	TACT SWITCH(MSEC)	
	S907	ESP0001-023M	TACT SWITCH(SEA FLAT)	
	S908	ESP0001-023M	TACT SWITCH(DEMO)	
	S909	ESP0001-023M	TACT SWITCH(DISPLAY)	
	S910	ESP0001-023M	TACT SWITCH(MODE ▼)	
	S911	ESP0001-023M	TACT SWITCH(SOURCE ◀)	
	BC333	EWS32B-A912	SOCKET WIRE(11PIN)	
	BC334	EWS32C-A912	SOCKET WIRE(12PIN)	
	BC492	EWS328-A916	SOCKET WIRE(8PIN)	
	BC493	EWS328-A916	SOCKET WIRE(8PIN)	
	BC612	EWS296-0120	SOCKET WIRE(6PIN)	
	BC972	EWS299-0113	SOCKET WIRE(9PIN)	
	BK901	E308331-001	FL HOLDER	
	FL901	ELU0001-146	FL TUBE	
	FS699	E3400-431	FELT SPACER	
	FS901	E306805-014	FELT SPACER	
	FW481	EWR36B-13LST	FLAT WIRE(6PIN)	
	FW495	EWR34B-08LST	FLAT WIRE(4PIN)	
	FW496	EWR38B-08LST	FLAT WIRE(8PIN)	
	FW497	EWR37B-10LST	FLAT WIRE(7PIN)	
	FW498	EWR37B-10LST	FLAT WIRE(7PIN)	
	FW901	EWR37B-13SST	FLAT WIRE(7PIN)	
	FW902	EWR38B-08SST	FLAT WIRE(8PIN)	
	FW903	EWR37B-10SST	FLAT WIRE(7PIN)	
	JB901	EMV7123-021	CONNECTOR(21PIN)	
	JT481	EMV7122-103	CONNECTOR(3PIN)	
	JT482	EMV7122-103	CONNECTOR(3PIN)	
	XT491	ECX0004-194KM	RESONATOR	
	XT901	ECX0060-000EM	RESONATOR	

⚠ : SAFETY PARTS

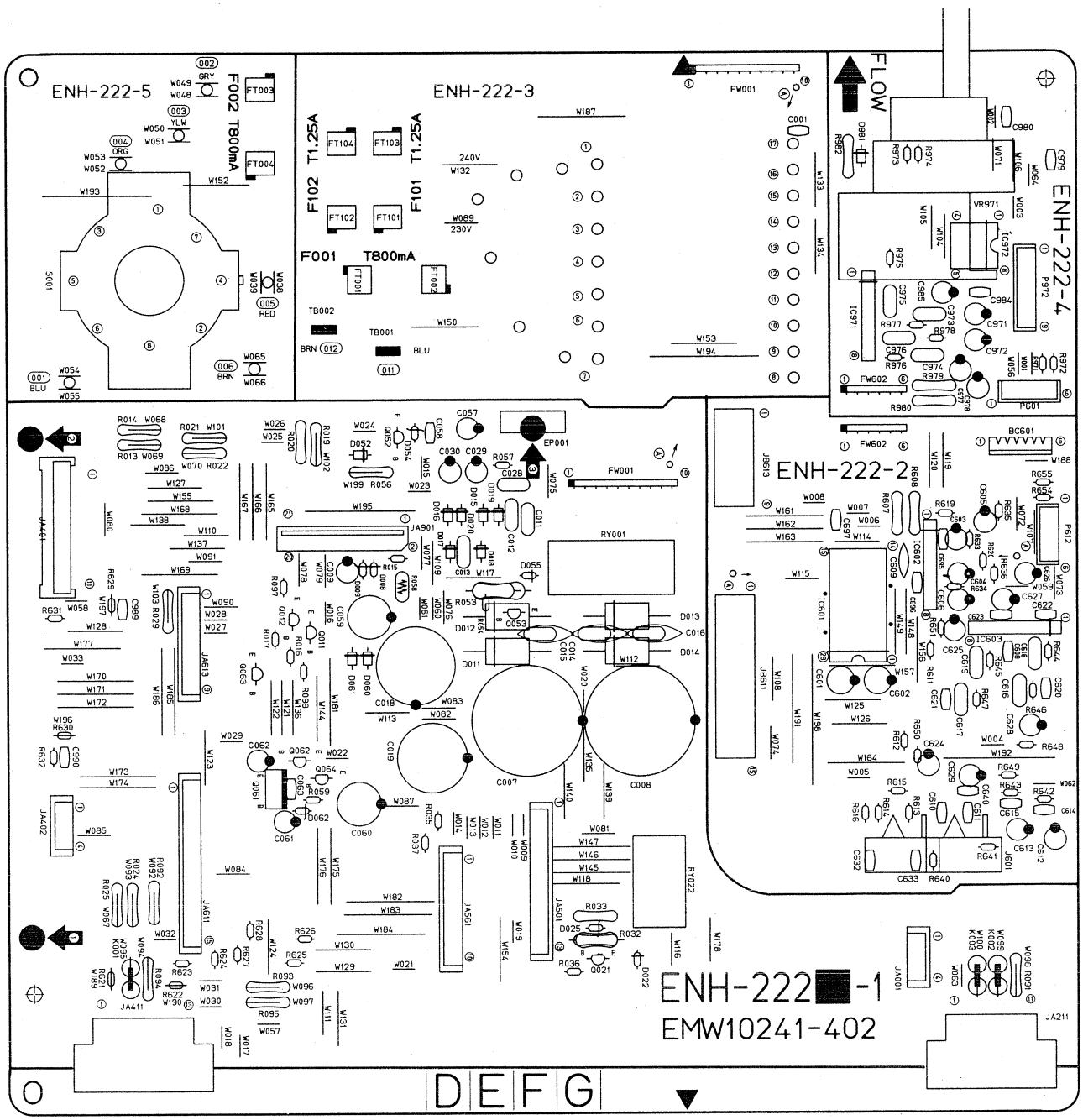
■ENH-222☐ Input Selector & Power Supply PC Board Ass'y (the U.S.A. , Canada)

Note : ENH-222 ☐ varies according to the areas employed. See note (1) when placing an order.



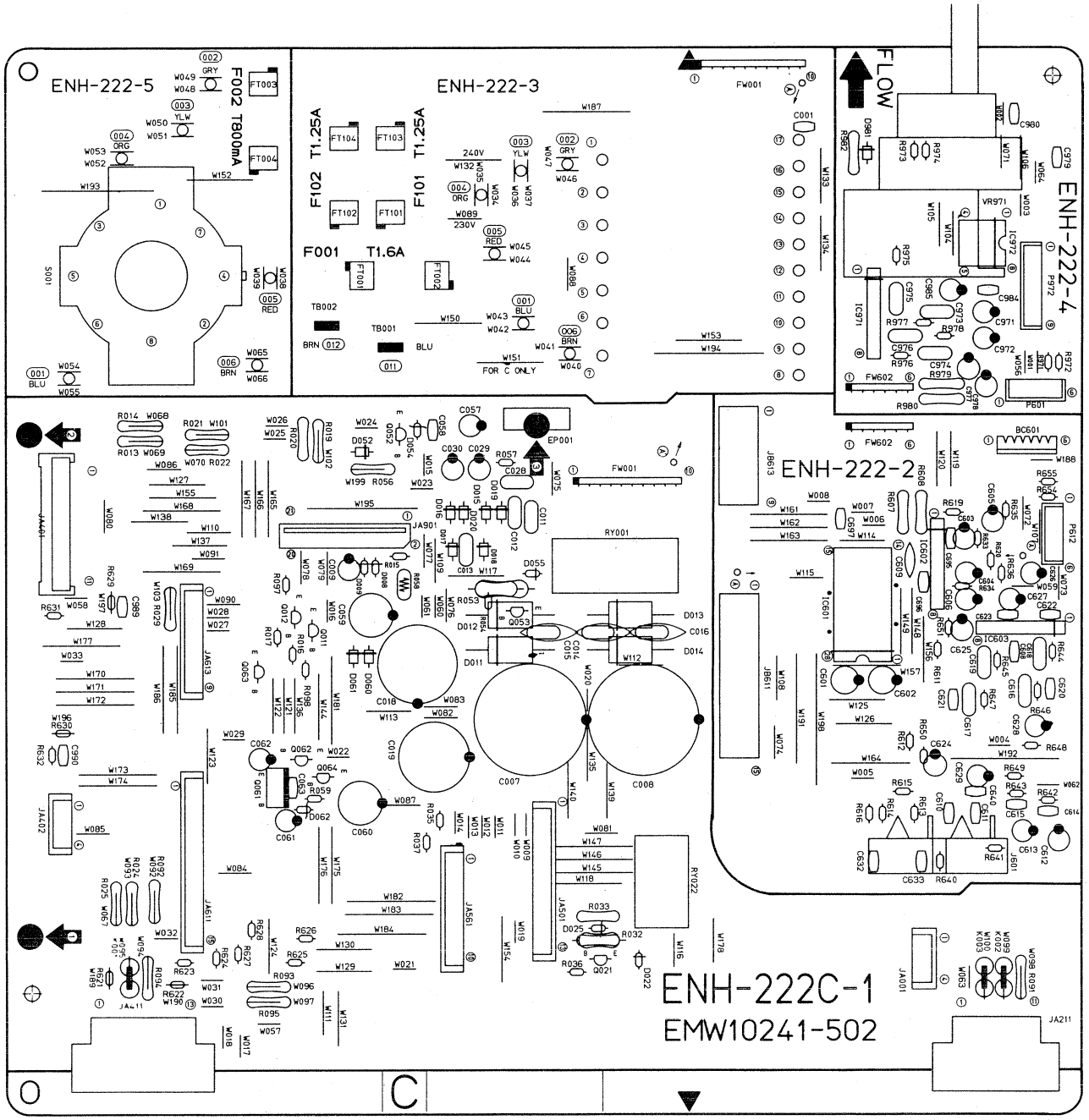
■ENH-222☐ Input Selector & Power Supply PC Board Ass'y
(Australia , Scandinavia , Continental Europe , the U.K. , Germany , Italy)

Note : ENH-222☐ varies according to the areas employed. See note (1) when placing an order.



■ENH-222 C Input Selector & Power Supply PC Board Ass'y (Taiwan , Universal Type)

Note : ENH-222 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENH-222 [A]	the U.S.A.
ENH-222 [B]	Canada
ENH-222 [C]	Taiwan , Universal Type
ENH-222 [D]	Scandinavia Continental Europe
ENH-222 [E]	Australia
ENH-222 [F] BS	the U.K.
ENH-222 [G]	Germany , Italy

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q011	DTC114YS	SILICON ROHM	
	Q012	DTC114YS	SILICON ROHM	
	Q021	2SC1740S(R,S)	SILICON ROHM	
	Q052	2SC1741AS(QR)	SILICON	
	Q053	2SC1740S(R,S)	SILICON ROHM	
	Q061	2SB1357(E,F)	SILICON ROHM	
	Q062	DTA144ES	SILICON ROHM	
	Q063	DTC143TS	SILICON ROHM	
	Q064	DTC114YS	SILICON ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC601	TC9163N	I.C. TOSHIBA	
	IC602	BA15218N	I.C. ROHM	
	IC603	VC4580LD	I.C. DAINICHI	
	IC971	BA15218N	I.C. ROHM	
	IC972	LB1639-CV	I.C. SANYO	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D008	1SS133	SILICON ROHM	
	D009	MTZ5.1JC	ZENER ROHM	
	D011	S3V20F	SILICON SINDENGEN	A
	D011	S3V20F	SILICON SINDENGEN	B
⚠	D011	30DL2FC	SILICON NIHONINTER	C
⚠	D011	30DL2FC	SILICON NIHONINTER	D
⚠	D011	30DL2FC	SILICON NIHONINTER	E
⚠	D011	30DL2FC	SILICON NIHONINTER	FBS
⚠	D011	30DL2FC	SILICON NIHONINTER	G
	D012	S3V20F	SILICON SINDENGEN	A
	D012	S3V20F	SILICON SINDENGEN	B
⚠	D012	30DL2FC	SILICON NIHONINTER	C
⚠	D012	30DL2FC	SILICON NIHONINTER	D
⚠	D012	30DL2FC	SILICON NIHONINTER	E
⚠	D012	30DL2FC	SILICON NIHONINTER	FBS
⚠	D012	30DL2FC	SILICON NIHONINTER	G
	D013	S3V20F	SILICON SINDENGEN	A
	D013	S3V20F	SILICON SINDENGEN	B
⚠	D013	30DL2FC	SILICON NIHONINTER	C
⚠	D013	30DL2FC	SILICON NIHONINTER	D
⚠	D013	30DL2FC	SILICON NIHONINTER	E
⚠	D013	30DL2FC	SILICON NIHONINTER	FBS
⚠	D013	30DL2FC	SILICON NIHONINTER	G
	D014	S3V20F	SILICON SINDENGEN	A
	D014	S3V20F	SILICON SINDENGEN	B
⚠	D014	30DL2FC	SILICON NIHONINTER	C
⚠	D014	30DL2FC	SILICON NIHONINTER	D
⚠	D014	30DL2FC	SILICON NIHONINTER	E
⚠	D014	30DL2FC	SILICON NIHONINTER	FBS
⚠	D014	30DL2FC	SILICON NIHONINTER	G
	D015	1SR139-200	SILICON ROHM	
	D016	1SR139-200	SILICON ROHM	
	D017	1SR139-200	SILICON ROHM	
	D018	1SR139-200	SILICON ROHM	
	D019	1SR139-200	SILICON ROHM	
	D020	1SR139-200	SILICON ROHM	
	D022	1SS133	SILICON ROHM	
	D025	MTZ11JC	ZENER ROHM	C
	D025	MTZ11JC	ZENER ROHM	D
	D025	MTZ11JC	ZENER ROHM	E

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D025	MTZ11JC	ZENER ROHM	FBS
	D025	MTZ11JC	ZENER ROHM	G
	D052	1SR139-200	SILICON ROHM	
	D054	MTZ5.1JC	ZENER ROHM	
	D055	1SS133	SILICON ROHM	
	D060	1SR139-200	SILICON ROHM	
	D061	1SR139-200	SILICON ROHM	
	D062	MTZ30JC	ZENER ROHM	
	D981	1SR139-200	SILICON ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C001	QCVB1CM-103	0.01MF 16V CERAMIC	
	C007	EEW4205-688T	6800MF ELECTRO	
	C008	EEW4205-688T	6800MF ELECTRO	
	C009	QETB1HM-225	2.2MF 50V ELECTRO	
	C011	QFV81HJ-104	0.1MF 50V T.FILM	
	C012	QFV81HJ-104	0.1MF 50V T.FILM	
	C013	QFV81HJ-104	0.1MF 50V T.FILM	
	C014	QFN82AK-103	0.01MF 100V MYLAR	A
	C014	QFN82AK-103	0.01MF 100V MYLAR	B
	C014	QFV82AJ-104	0.1MF 100V T.FILM	C
	C014	QFV82AJ-104	0.1MF 100V T.FILM	D
	C014	QFV82AJ-104	0.1MF 100V T.FILM	E
	C014	QFV82AJ-104	0.1MF 100V T.FILM	FBS
	C014	QFV82AJ-104	0.1MF 100V T.FILM	G
	C015	QFN81HJ-103	0.01MF 50V MYLAR	A
	C015	QFN81HJ-103	0.01MF 50V MYLAR	B
	C015	QFN81HJ-104	0.1MF 50V MYLAR	C
	C015	QFN81HJ-104	0.1MF 50V MYLAR	D
	C015	QFN81HJ-104	0.1MF 50V MYLAR	E
	C015	QFN81HJ-104	0.1MF 50V MYLAR	FBS
	C015	QFN81HJ-104	0.1MF 50V MYLAR	G
	C016	QFN81HJ-103	0.01MF 50V MYLAR	A
	C016	QFN81HJ-103	0.01MF 50V MYLAR	B
	C016	QFN81HJ-104	0.1MF 50V MYLAR	C
	C016	QFN81HJ-104	0.1MF 50V MYLAR	D
	C016	QFN81HJ-104	0.1MF 50V MYLAR	E
	C016	QFN81HJ-104	0.1MF 50V MYLAR	FBS
	C016	QFN81HJ-104	0.1MF 50V MYLAR	G
	C018	QETB1VM-338	3300MF 35V ELECTRO	
	C019	QETB1VM-228N	2200MF 35V ELECTRO	
	C028	QFLB1HJ-104	0.1MF 50V MYLAR	
	C029	QETB1HM-106	10MF 50V ELECTRO	
	C030	EEZ5009-106	10MF ELECTRO	
	C057	QETB1HM-106	10MF 50V ELECTRO	
	C058	QCVB1CM-103	0.01MF 16V CERAMIC	
	C059	QETB1HM-227	220MF 50V ELECTRO	
	C060	QETB1JM-227	220MF 63V ELECTRO	
	C061	QETB1HM-226	22MF 50V ELECTRO	
	C062	QETB1HM-226	22MF 50V ELECTRO	
	C063	QCGB1HK-102	1000PF 50V CERAMIC	
	C601	QETB1EM-476	47MF 25V ELECTRO	
	C602	QETB1EM-476	47MF 25V ELECTRO	
	C603	EEZ5009-106	10MF ELECTRO	
	C604	EEZ5009-106	10MF ELECTRO	
	C605	EEZ5009-106	10MF ELECTRO	
	C606	EEZ5009-106	10MF ELECTRO	
	C608	QCHB1EZ-223	0.022MF 25V CERAMIC	G
	C610	QCBB1HK-561	560PF 50V CERAMIC	G
	C611	QCBB1HK-561	560PF 50V CERAMIC	G
	C612	QETB1HM-475	4.7MF 50V ELECTRO	
	C613	QETB1HM-475	4.7MF 50V ELECTRO	
	C614	QCBB1HK-101	100PF 50V CERAMIC	
	C615	QCBB1HK-101	100PF 50V CERAMIC	
	C616	QFLB1HJ-182	1800PF 50V MYLAR	
	C617	QFLB1HJ-182	1800PF 50V MYLAR	
	C618	QFLB1HJ-682	6800PF 50V MYLAR	
	C619	QFLB1HJ-682	6800PF 50V MYLAR	
	C620	QCBB1HK-101	100PF 50V CERAMIC	
	C621	QCBB1HK-101	100PF 50V CERAMIC	
	C622	QCBB1HK-101	100PF 50V CERAMIC	
	C623	QCBB1HK-101	100PF 50V CERAMIC	
	C624	QETB1HM-475	4.7MF 50V ELECTRO	
	C625	QETB1HM-475	4.7MF 50V ELECTRO	
	C626	QETB1EM-476	47MF 25V ELECTRO	
	C627	QETB1EM-476	47MF 25V ELECTRO	
	C628	QETB1EM-476	47MF 25V ELECTRO	
	C629	QETB1EM-476	47MF 25V ELECTRO	
	C632	QCBB1HK-331	330PF 50V CERAMIC	C
	C632	QCBB1HK-331	330PF 50V CERAMIC	D
	C632	QCBB1HK-331	330PF 50V CERAMIC	E
	C632	QCBB1HK-331	330PF 50V CERAMIC	FBS
	C632	QCBB1HK-331	330PF 50V CERAMIC	G
	C633	QCBB1HK-331	330PF 50V CERAMIC	C
	C633	QCBB1HK-331	330PF 50V CERAMIC	D
	C633	QCBB1HK-331	330PF 50V CERAMIC	E

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C633	QCBB1HK-331	330PF	50V	CERAMIC	FBS
	C633	QCBB1HK-331	330PF	50V	CERAMIC	G
	C697	QCBB1HK-561	560PF	50V	CERAMIC	
	C971	QETB1CM-476	47MF	16V	ELECTRO	
	C972	QETB1CM-476	47MF	16V	ELECTRO	
	C973	QFLB1HJ-473	0.047MF	50V	MYLAR	
	C974	QFLB1HJ-473	0.047MF	50V	MYLAR	
	C975	QFV81HJ-474	0.47MF	50V	T.FILM	
	C976	QFV81HJ-474	0.47MF	50V	T.FILM	
	C977	QETB1CM-476	47MF	16V	ELECTRO	
	C978	QETB1CM-476	47MF	16V	ELECTRO	
	C984	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C985	QER50JM-476	47MF	6.3V	ELECTRO	
	C989	QCBB1HK-471	470PF	50V	CERAMIC	G
	C990	QCBB1HK-471	470PF	50V	CERAMIC	G

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
⚠	R005	QRC128K-275EM	2.7M	1/2W	COMPOSI	A
⚠	R005	QRC128K-275EM	2.7M	1/2W	COMPOSI	B
	R015	QRD167J-103	10K	1/6W	CARBON	
	R016	QRD167J-103	10K	1/6W	CARBON	
	R017	QRD167J-102	1K	1/6W	CARBON	
⚠	R019	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	
⚠	R020	QRD14CJ-5R6S	5.6	1/4W	UNF.CARBON	
⚠	R021	QRD14CJ-680S	68	1/4W	UNF.CARBON	A
⚠	R021	QRD14CJ-680S	68	1/4W	UNF.CARBON	B
⚠	R022	QRD14CJ-680S	68	1/4W	UNF.CARBON	A
⚠	R022	QRD14CJ-680S	68	1/4W	UNF.CARBON	B
⚠	R025	QRD14CJ-3R9S	3.9	1/4W	UNF.CARBON	A
⚠	R025	QRD14CJ-3R9S	3.9	1/4W	UNF.CARBON	B
⚠	R032	QRD14CJ-151S	150	1/4W	UNF.CARBON	A
⚠	R032	QRD14CJ-151S	150	1/4W	UNF.CARBON	B
⚠	R032	QRZ0077-151	150	1/4W	FUSIBLE	C
⚠	R032	QRZ0077-151	150	1/4W	FUSIBLE	D
⚠	R032	QRZ0077-151	150	1/4W	FUSIBLE	E
⚠	R032	QRZ0077-151	150	1/4W	FUSIBLE	FBS
⚠	R032	QRZ0077-151	150	1/4W	FUSIBLE	G
	R033	QRD12CJ-391S	390	1/2W	R.NETWORK	A
	R033	QRD12CJ-391S	390	1/2W	R.NETWORK	B
	R033	QRD12CJ-331S	330	1/2W	R.NETWORK	C
	R033	QRD12CJ-331S	330	1/2W	R.NETWORK	D
	R033	QRD12CJ-331S	330	1/2W	R.NETWORK	E
	R033	QRD12CJ-331S	330	1/2W	R.NETWORK	FBS
	R033	QRD12CJ-331S	330	1/2W	R.NETWORK	G
	R035	QRD167J-222	2.2K	1/6W	CARBON	
	R036	QRD167J-152	1.5K	1/6W	CARBON	
	R037	QRD167J-103	10K	1/6W	CARBON	
⚠	R053	QRG022J-221A	220	2W	O.M.FILM	
	R054	QRD167J-222	2.2K	1/6W	CARBON	
⚠	R056	QRD14CJ-220S	22	1/4W	UNF.CARBON	A
⚠	R056	QRD14CJ-220S	22	1/4W	UNF.CARBON	B
	R057	QRD167J-223	22K	1/6W	CARBON	
⚠	R058	PTH61G25AR4R7M			FUSIBLE RE SI	
	R059	QRD167J-332	3.3K	1/6W	CARBON	
⚠	R094	QRD14CJ-3R9S	3.9	1/4W	UNF.CARBON	A
⚠	R094	QRD14CJ-3R9S	3.9	1/4W	UNF.CARBON	B
	R097	QRD167J-102	1K	1/6W	CARBON	
	R098	QRD167J-121	120	1/6W	CARBON	
⚠	R607	QRD14CJ-680S	68	1/4W	UNF.CARBON	A
⚠	R607	QRD14CJ-680S	68	1/4W	UNF.CARBON	B
⚠	R607	QRZ0077-560	56	1/4W	FUSIBLE	C
⚠	R607	QRZ0077-560	56	1/4W	FUSIBLE	D
⚠	R607	QRZ0077-560	56	1/4W	FUSIBLE	E
⚠	R607	QRZ0077-560	56	1/4W	FUSIBLE	FBS
⚠	R607	QRZ0077-560	56	1/4W	FUSIBLE	G
⚠	R608	QRD14CJ-680S	68	1/4W	UNF.CARBON	A
⚠	R608	QRD14CJ-680S	68	1/4W	UNF.CARBON	B
⚠	R608	QRZ0077-560	56	1/4W	FUSIBLE	C
⚠	R608	QRZ0077-560	56	1/4W	FUSIBLE	D
⚠	R608	QRZ0077-560	56	1/4W	FUSIBLE	E
⚠	R608	QRZ0077-560	56	1/4W	FUSIBLE	FBS
⚠	R608	QRZ0077-560	56	1/4W	FUSIBLE	G
	R611	QRD167J-104	100K	1/6W	CARBON	
	R612	QRD167J-104	100K	1/6W	CARBON	
	R613	QRD167J-153	15K	1/6W	CARBON	
	R614	QRD167J-153	15K	1/6W	CARBON	
	R615	QRD167J-104	100K	1/6W	CARBON	
	R616	QRD167J-104	100K	1/6W	CARBON	
	R619	QRD167J-104	100K	1/6W	CARBON	
	R620	QRD167J-104	100K	1/6W	CARBON	
	R621	QRD167J-102	1K	1/6W	CARBON	
	R622	QRD167J-102	1K	1/6W	CARBON	
	R623	QRD167J-562	5.6K	1/6W	CARBON	
	R624	QRD167J-562	5.6K	1/6W	CARBON	
	R625	QRD167J-222	2.2K	1/6W	CARBON	
	R626	QRD167J-222	2.2K	1/6W	CARBON	
	R627	QRD167J-562	5.6K	1/6W	CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R628	QRD167J-562	5.6K	1/6W	CARBON	
	R631	QRD167J-103	10K	1/6W	CARBON	
	R632	QRD167J-103	10K	1/6W	CARBON	
	R633	QRD167J-104	100K	1/6W	CARBON	
	R634	QRD167J-104	100K	1/6W	CARBON	
	R635	QRD167J-104	100K	1/6W	CARBON	
	R636	QRD167J-104	100K	1/6W	CARBON	
	R640	QRD167J-222	2.2K	1/6W	CARBON	
	R641	QRD167J-222	2.2K	1/6W	CARBON	
	R642	QRD167J-473	47K	1/6W	CARBON	
	R643	QRD167J-473	47K	1/6W	CARBON	
	R644	QRD167J-474	470K	1/6W	CARBON	
	R645	QRD167J-474	470K	1/6W	CARBON	
	R646	QRD167J-393	39K	1/6W	CARBON	
	R647	QRD167J-393	39K	1/6W	CARBON	
	R648	QRD167J-821	820	1/6W	CARBON	
	R649	QRD167J-821	820	1/6W	CARBON	
	R650	QRD167J-561	560	1/6W	CARBON	
	R651	QRD167J-561	560	1/6W	CARBON	
	R654	QRD167J-391	390	1/6W	CARBON	
	R655	QRD167J-391	390	1/6W	CARBON	
	R971	QRD167J-222	2.2K	1/6W	CARBON	
	R972	QRD167J-222	2.2K	1/6W	CARBON	
	R973	QRD167J-153	15K	1/6W	CARBON	
	R974	QRD167J-153	15K	1/6W	CARBON	
	R975	QRD167J-331	330	1/6W	CARBON	
	R976	QRD167J-331	330	1/6W	CARBON	
	R977	QRD167J-474	470K	1/6W	CARBON	
	R978	QRD167J-474	470K	1/6W	CARBON	
	R979	QRD167J-331	330	1/6W	CARBON	
	R980	QRD167J-331	330	1/6W	CARBON	
⚠	R982	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	
	VR971	QVDB91B-E15H	100K		VARIABLE	

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	J601	EMN00TV-412B	4P PIN JACK	
	P601	EMV5109-006A	PLUG ASSY(6PIN)	
	P612	EMV5109-006A	PLUG ASSY(6PIN)	
	P972	EMV5109-009A	PLUG ASSY(9PIN)	
⚠	S001	QSR0085-018	VOLTAGE SELECTOR	C
	BC601	EWS296-0116	SOCKET WIRE(6PIN)	
	EP001	E70859-001	EARTH PLATE	A
	EP001	E70859-001	EARTH PLATE	B
	FT001	EMG7331-002	FUSE CLIP	
	FT002	EMG7331-002U	FUSE CLIP	
	FT003	EMG7331-002	FUSE CLIP	C
	FT004	EMG7331-002U	FUSE CLIP	C
	FT101	EMG7331-002	FUSE CLIP	
	FT102	EMG7331-002	FUSE CLIP	
	FT103	EMG7331-002U	FUSE CLIP	
	FT104	EMG7331-002U	FUSE CLIP	
	FW001	EWR3AE-25SST	FLAT WIRE(10PIN)	A
	FW001	EWR3AB-25SST	FLAT WIRE(10PIN)	B
	FW001	EWR3AE-25SST	FLAT WIRE(10PIN)	C
	FW001	EWR3AE-25SST	FLAT WIRE(10PIN)	D
	FW001	EWR3AE-25SST	FLAT WIRE(10PIN)	E
	FW001	EWR3AE-25SST	FLAT WIRE(10PIN)	FBS
	FW001	EWR3AE-25SST	FLAT WIRE(10PIN)	G
	FW602	EWR36B-16SST	FLAT WIRE(6PIN)	
	JA001	EMV5125-004	PLUG ASSY(4PIN)	
	JA211	EMV7127-011	CONNECTOR(11PIN)	
	JA401	EMV5140-011	PLUG ASSY(11PIN)	
	JA402	EMV5125-004	PLUG ASSY(4PIN)	
	JA411	EMV7127-013	CONNECTOR(13PIN)	
	JA501	EMV5125-013	PLUG ASSY(13PIN)	
	JA561	EMV5125-010	PLUG ASSY(10PIN)	
	JA611	EMV5125-015	PLUG ASSY(15PIN)	
	JA613	EMV5125-009	PLUG ASSY(9PIN)	
	JA901	EMV7123-021	CONNECTOR(21PIN)	
	JB611	EMV7125-015R	CONNECTOR(15PIN)	
	JB613	EMV7125-009R	CONNECTOR(9PIN)	
	RY001	ESK1D12-211M	RELAY	
	RY022	ESK8D24-212	RELAY	
	TB001	EMZ4001-001	TAB	
	TB002	EMZ4001-001	TAB	

⚠ : SAFETY PARTS

Accessories List

⚠	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1929A	INSTRUCTION BOOK	1		J
	E30580-1930A	INSTRUCTION BOOK	1		C
	E30580-1930A	INSTRUCTION BOOK	1		EF
	E30580-1930A	INSTRUCTION BOOK	1		G
	E30580-1930A	INSTRUCTION BOOK	1		GI
	E30580-1931A	INSTRUCTION BOOK	1		U
	E30580-1931A	INSTRUCTION BOOK	1		UT
	E30580-1932A	INSTRUCTION BOOK	1		A
	E30580-1932ABS	INSTRUCTION BOOK	1		BS
	E30580-1933A	INSTRUCTION BOOK	1		EN
	BT-51006-1	SAFETY REGISTRATION CARD	1		J
	BT-20025K	WARRANTY CARD	1		C
	BT-20134	WARRANTY CARD	1		G
	BT20060	WARRANTY CARD	1		BS
	BT-20122	AUDIO WARRANTY CARD	1		A
	BT-20122-1	LTD STICKER	1		A
	BT-20044G	SAFETY INSTRUCTION SHEET	1		J
	BT20071A	SERVICE CENTER LIST	1		C
	BT20066A	EEC AGENCY	1		BS
	E43486-340A	SAFETY SHEET	1		BS
	QZL1008-001	FTZ INFORMATION SHEET	1		G
	EMZ2001-012	ADAPTER	1		EN
	EMZ2001-012	ADAPTER	1		EF
	EMZ2001-012	ADAPTER	1		BS
	EMZ2001-012	ADAPTER	1		GI
	E43486-410B	CAUTION SHEET	1		
	E35497-019	CAUTION SHEET	1	220V	U
	E35497-019	CAUTION SHEET	1	220V	UT
	E306858-002	CAUTION SHEET	1		UT
⚠	E04056	SIEMEMS PLUG	1		U
⚠	E04056	SIEMEMS PLUG	1		UT
	EWP502-005K	BILT-IN ANTENNA	1		J
	EWP502-005K	BILT-IN ANTENNA	1		C
	EWP502-005K	BILT-IN ANTENNA	1		A
	EWP502-005K	BILT-IN ANTENNA	1		BS
	EWP502-005K	BILT-IN ANTENNA	1		EN
	EWP502-005K	BILT-IN ANTENNA	1		EF
	EWP502-005K	BILT-IN ANTENNA	1		GI
	EWP502-005K	BILT-IN ANTENNA	1		U
	EWP502-005K	BILT-IN ANTENNA	1		UT
	E67007-001	WIRE ANTENNA	1		G
	EQB4001-015	AM LOOP ANTENNA	1		
	R03BPA-2STSA	BATTERY	1		J
	R03BPA-2STSA	BATTERY	1		C
	UM-4NJ-2PSA	BATTERY	1		A
	UM-4NJ-2PSA	BATTERY	1		BS
	UM-4NJ-2PSA	BATTERY	1		EN
	UM-4NJ-2PSA	BATTERY	1		EF
	UM-4NJ-2PSA	BATTERY	1		G
	UM-4NJ-2PSA	BATTERY	1		GI

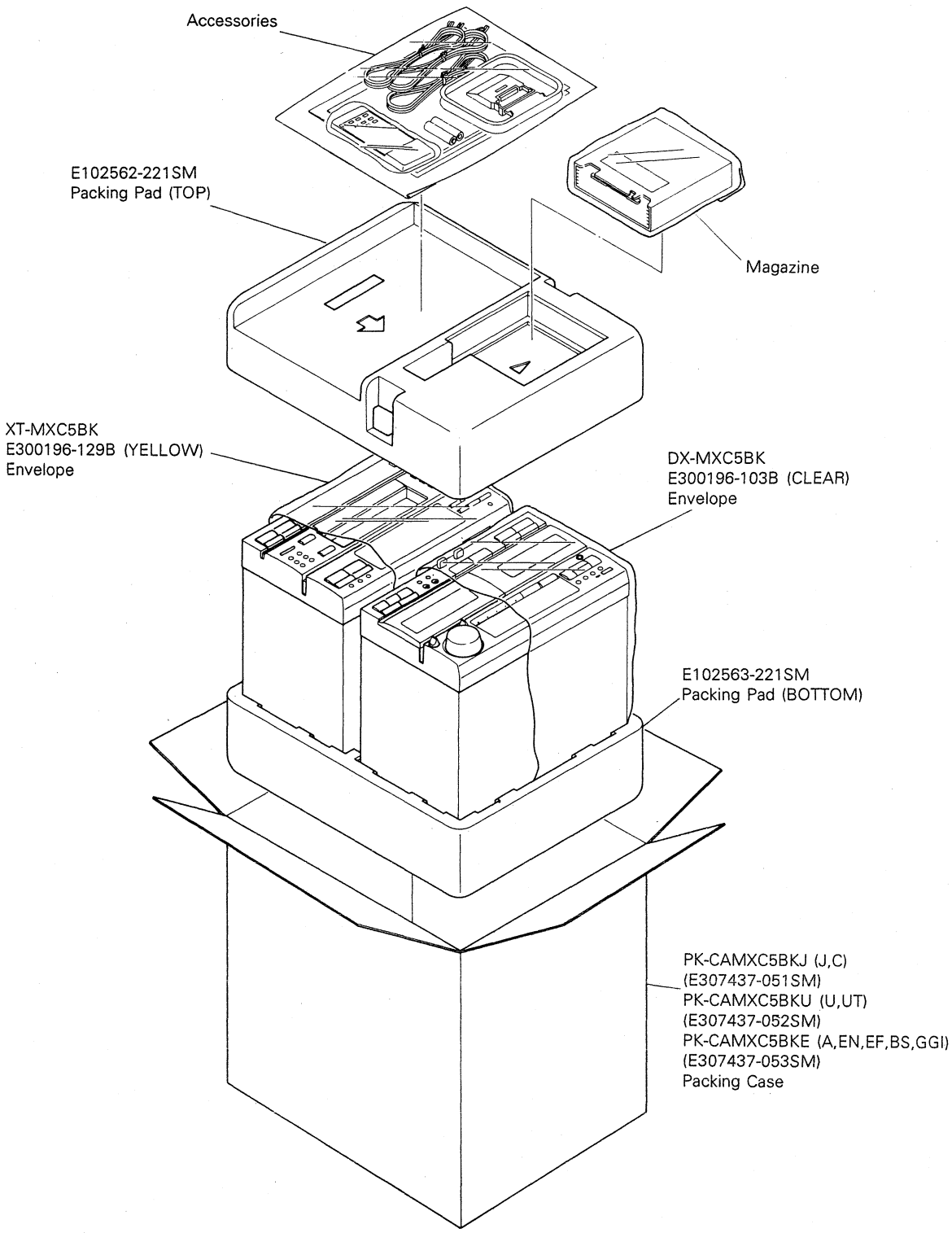
⚠	Part Number	Part Name	Q'ty	Description	Areas
	UM-4NJ-2PSA	BATTERY	1		U
	UM-4NJ-2PSA	BATTERY	1		UT
	RM-SEMXC5U	REMOTE CONTROLLER	1		
	56W820A	BATTERY COVER	1		
	E26072-005	MAGAZINE	1		
	QPGA020-02505	ENVELOPE	1		C
	QPGA020-02505	ENVELOPE	1		A
	QPGA020-02505	ENVELOPE	1		G
	QPGA020-02505	ENVELOPE	1		BS
	QPGA025-03505B	ENVELOPE	1		J
	QPGA025-03505B	ENVELOPE	1		BS
	QPGA025-03505	ENVELOPE	1		C
	QPGA025-03505	ENVELOPE	1		A
	QPGA025-03505	ENVELOPE	1		EN
	QPGA025-03505	ENVELOPE	1		EF
	QPGA025-03505	ENVELOPE	1		G
	QPGA025-03505	ENVELOPE	1		GI
	QPGA025-03505	ENVELOPE	1		U
	QPGA025-03505	ENVELOPE	1		UT

⚠ SAFETY PARTS

The Marks for Designated Areas

J ..... the U.S.A. C ..... Canada A ..... Australia BS .... the U.K.
EN .... Scandinavia EF ..... Continental Europe G ..... Germany GI ..... Itary
UT .... Taiwan U ..... Universal type **No mark indicates all areas.**

Packing Materials and Part Numbers



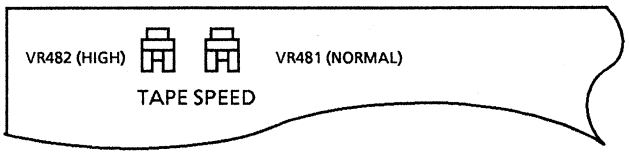
The Marks for Designated Areas			
J	the U.S.A.	BS	the U.K.
C	Canada	G	Germany
A	Australia	GI	Italy
EN	Scandinavia	UT	Taiwan
EF	Continental Europe	U	Universal Type
No marks indicates all areas.			

— MEMO —

— MEMO —

	Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
* 6	Record / Playback Sensitivity	1. Input a 1 kHz (– 8.2dBs: 300mV) signal to VIDEO/AUX terminals and record it on the left and right channels . 2. Connect an electronic voltmeter to the DOLBY TP (figure 3) to confirm the recorded values. 3. If the values are not satisfied , adjust the semi-fixed resistors and record the signals again to confirm the values.	L : VR311 R : VR312	– 5.5dBs (411mV)	Adjust with normal tape and make sure that the left / right level difference is 1.0dB or less
7	Erase ratio check	1. Record a music source using CrO_2 tape. 2. Rewind and erase the recorded section. 3. Comfirm nothing can be heard.	–	–	–
8	Auto-stop check	Make sure to operate AUTO STOP at the end of tape running and not to operate on the way of the playing.	–	–	–
9	Music Scan	1. Make sure not to work the music scanning operation at the start of tape wind using TMT-6237 . 2. Make sure to work the music scanning operation at the end of tape wind using TMT-6247 .	–	–	–

Mechanism controller PCB (ENB-165-3)



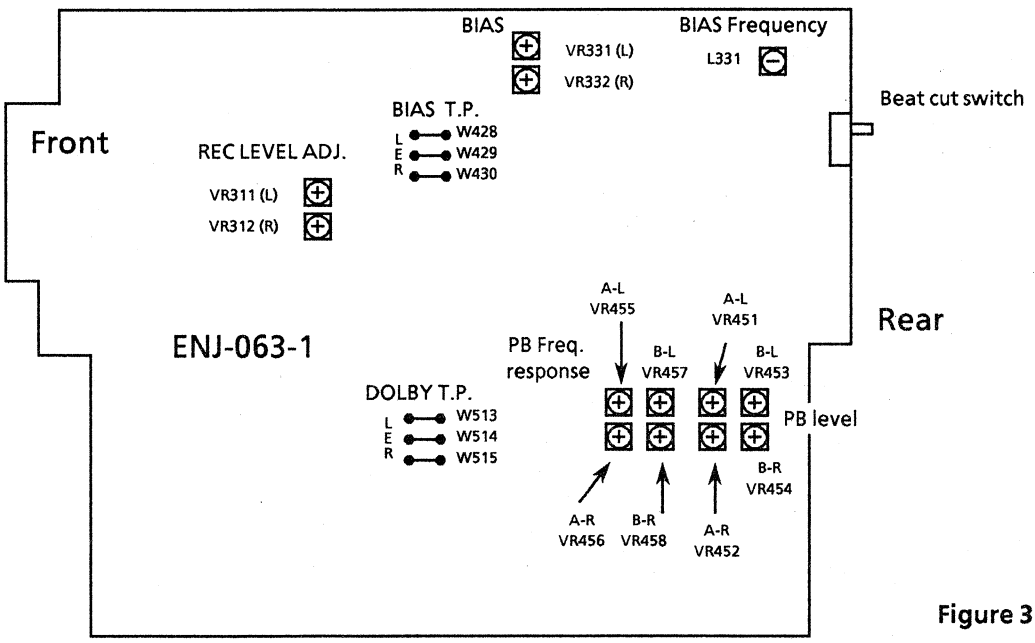


Figure 3